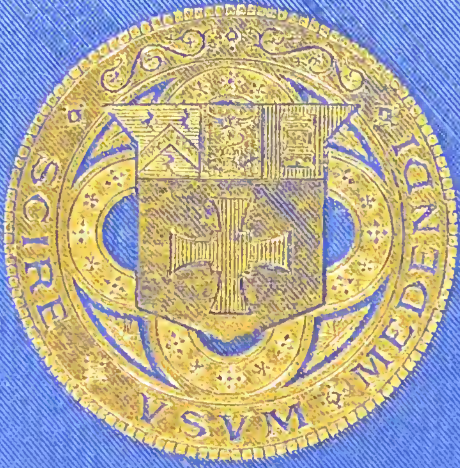

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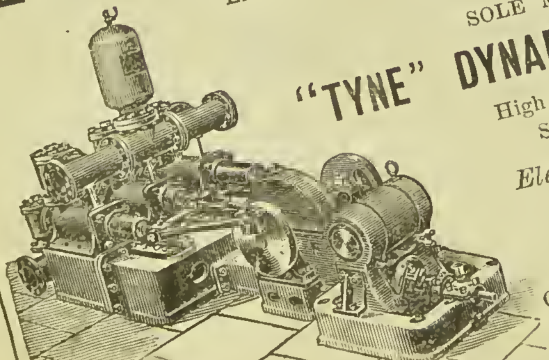

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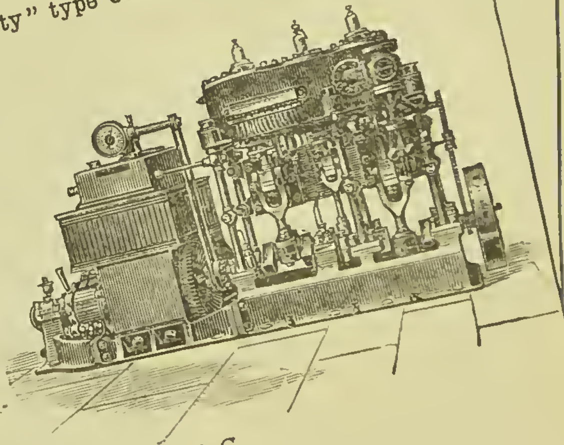

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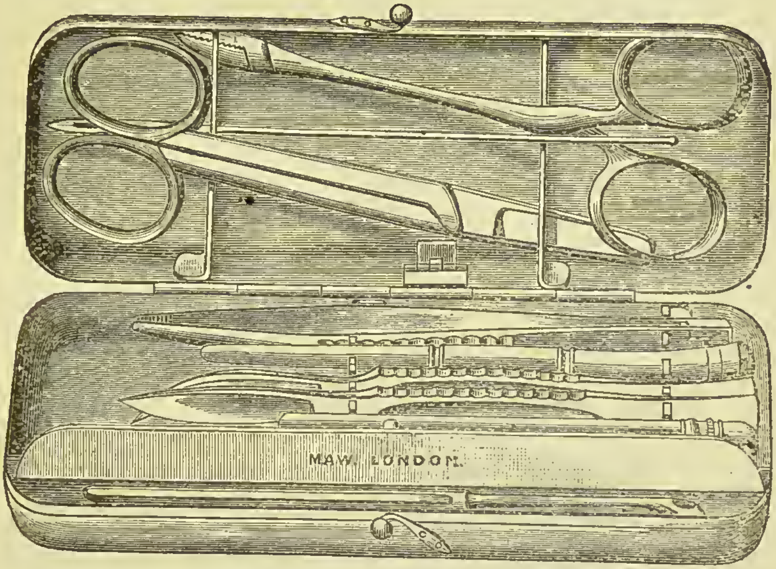

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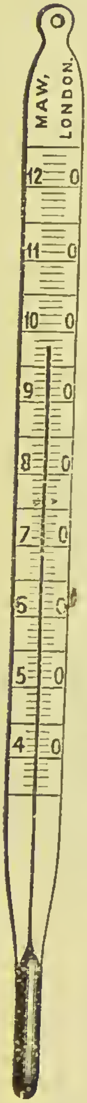

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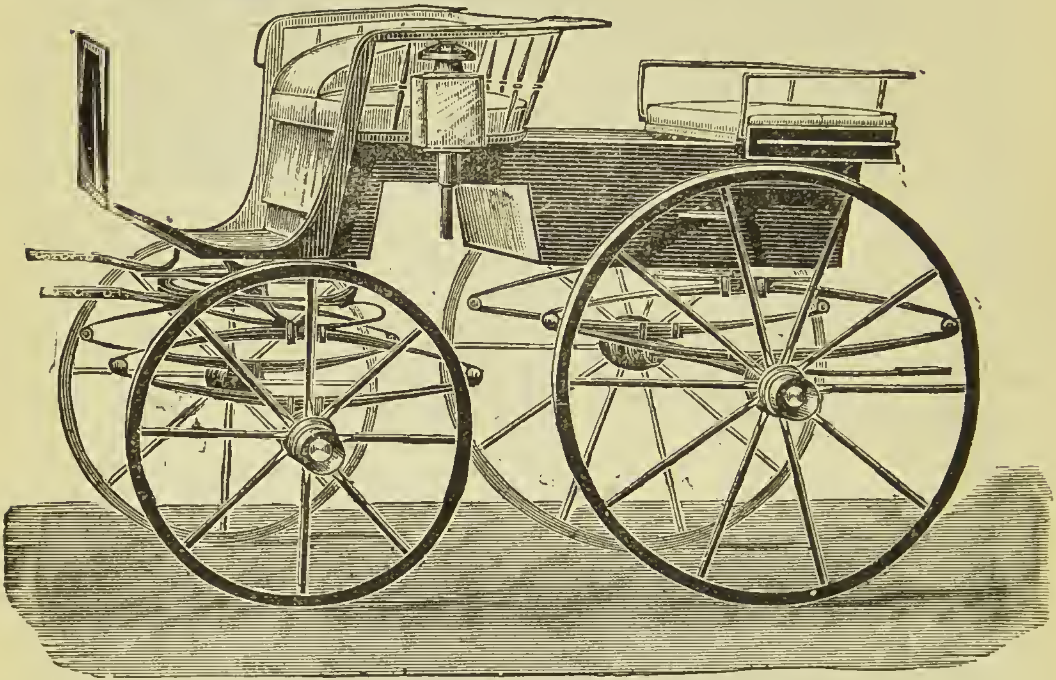

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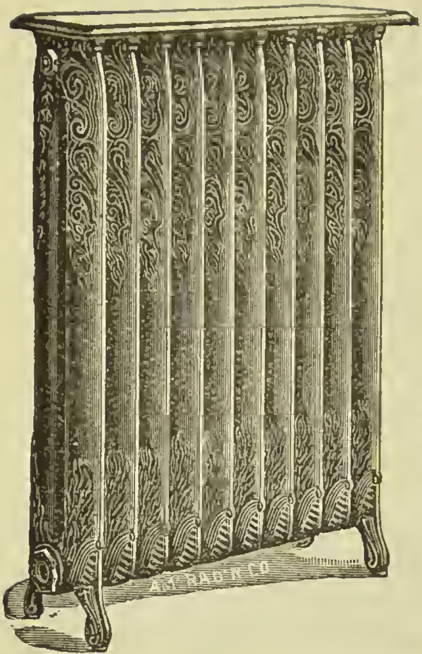

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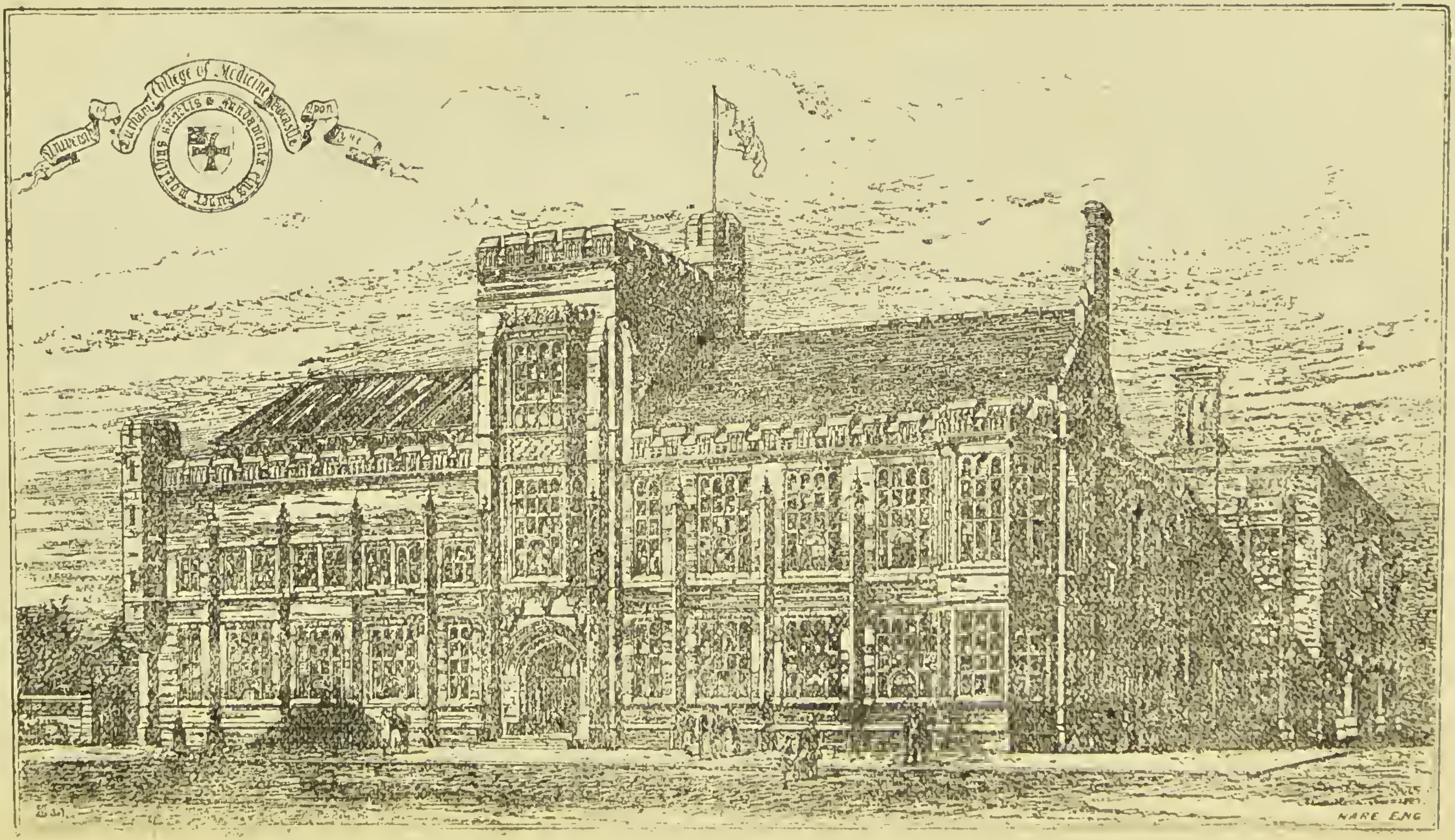
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INDEX.

PAGE.
Almanack ... 5
Officers of the University ... 7
Officers of the College of Medicine ... 8
Lecturers in the College of Medicine ... 9
Staff of the Royal Infirmary ... 10
Degrees in Medicine, Surgery, and Hygiene ... 11
Scholarships, Medals, and Prizes ... 11
College and Infirmary Offices tenable by Students of the College 18
Libraries and Museums ... 19
Departments of Practical Study ... 20
Students' Residences ... 24
Information for Students beginning Medical Education ... 24
Dental Course ... 27
Regulations for Students commencing Professional Study on or after January 1st, 1892 ... 28
Course of Study ... 30
Lectures—Winter Session ... 31
Do. Summer Session ... 39
Time Table of Lectures, etc. ... 45
Visiting Days at Royal Infirmary ... 46
Hospital Practice and Clinical Lectures ... 47
Fees for Lectures and Hospital Practice ... 48
Rules to be observed by Students ... 50
Scholars and Prizemen ... 53
Class Prizes ... 57
List of Students ... 60

Regulations for Degrees—

The Degree of Bachelor in Medicine ... 63
The Degree of Doctor in Medicine ... 68
The Degree of Bachelor in Surgery ... 69
The Degree of Master in Surgery ... 70
The Degree of Doctor in Medicine, for Medical Practitioners of fifteen years' standing, without residence... 72
The Degree of Bachelor in Hygiene ... 75
The Degree of Doctor in Hygiene ... 80
Regulations for the Diploma in Public Health ... 80
Regulations for the Diploma in Public Health for Medical Practitioners, Registered on or before January 1st, 1890 81
Directions for Candidates ... 81
Programmes of Examinations for the Degrees ... 83
Fees for Examinations and Degrees ... 90
Synopses of Subjects of the Examinations ... 91
Successful Candidates for the Degrees, etc., in Medicine, Surgery, and Hygiene ... 97
Examination Papers ... 106

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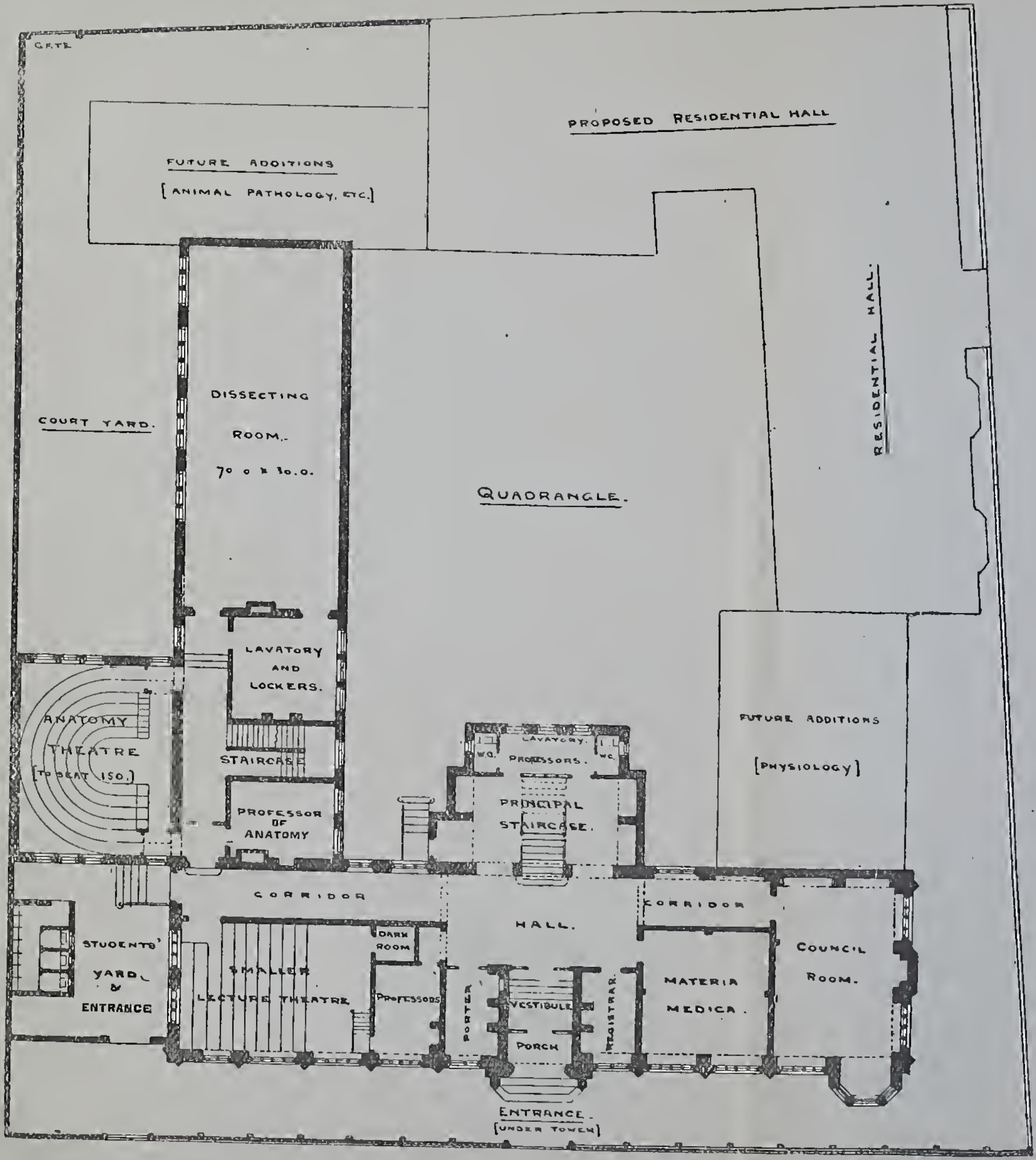
The Secretary will be happy to give any information either to Students or their friends. Applications should be made to Professor Howden, Secretary, College of Medicine, Newcastle-upon-Tyne.



UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.

GROUND PLAN AND PROPOSED ADDITIONS.

ALMANACK, 1896-1897.

1896.

September 7th...M.—First Examination for Degrees in Medicine and Surgery (old and new regulations) begins.

,, 14th...M.—Examinations for the Degrees of Bachelor and Doctor in Hygiene, for the Diploma in Public Health, and Second Examination for Degrees in Medicine and Surgery begin.

,, 21st...M.—Third Examination for Degrees in Medicine and Surgery (new regulations), Examinations for M.D. and M.S. Degrees, and Final Examination for M.B. and B.S. Degrees begin.

,, 22nd...Tu.—Examination for Certificate of Proficiency in General Education begins (at Durham), at 9 a.m.

,, 22nd...Tu.—Preliminary Arts Examination for the M.B. Degree begins (at Durham).

,, 26th...Sat.—Convocation held at Durham and Degrees conferred.

October 1st...Th.—Winter Session begins.

,, 8th...Th.—Registration Book closes.

,, 14th...W.—Examination for University Medical Scholarship (at Durham).

November 11th...W.—Ordinary Meeting of Council.

December 18th...Fri.—Christmas Vacation begins.

1897.

January 5th...Tu.—The College re-opens.

March 3rd...W.—Ordinary Meeting of Council.

,, 16th...Tu.—Preliminary Arts Examination for the M.B. Degree begins (at Durham).

,, 23rd...Tu.—Examination for Certificate of Proficiency in General Education begins (at Durham).

,, 29th...M.—Class Examinations begin.

,, 31st...W.—Winter Session ends.

April 5th...M.—First Examination for Degrees in Medicine and Surgery (old and new regulations) begins.

1897.

April 12th...M.—Examinations for the Degrees of Bachelor and Doctor in Hygiene, for the Diploma in Public Health, and Second Examination for Degrees in Medicine and Surgery begin.

,, 19th...M.—Third Examination for Degrees in Medicine and Surgery (new regulations), Examinations for M.D. and M.S. Degrees, and Final Examinations for M.B. and B.S. Degrees begin.

,, 24th...Sat.—Convocation held at Newcastle-upon-Tyne and Degrees conferred.

May 3rd...M.—Summer Session begins.

,, 10th...M.—Registration Book closes.

June 16th...W.—Ordinary Meeting of Council.

July 26th...M.—Class Examinations begin.

,, 28th...W.—Annual Meeting of the Members of the College.

,, 30th...Fri.—Summer Session ends.

August 11th...W.—Ordinary Meeting of Council.

September 6th...M.—First Examination for Degrees in Medicine and Surgery (old and new regulations) begins.

,, 13th...M.—Examinations for the Degrees of Bachelor and Doctor in Hygiene, for the Diploma in Public Health, and Second Examination for Degrees in Medicine and Surgery begin.

,, 14th...Tu.—Preliminary Arts Examination for the M.B. Degree begins (at Durham).

,, 21st...Tu.—Examination for Certificate of Proficiency in General Education begins (at Durham), at 9 a.m.

,, 20th...M.—Third Examination for Degrees in Medicine and Surgery (new regulations), Examination for M.D. and M.S. Degrees, and Final Examinations for M.B. and B.S. Degrees begin.

,, 25th...Sat.—Convocation held at Durham and Degrees conferred.

October 4th...M.—Winter Session begins.

,, 11th...M.—Registration Book closes.

,, 13th...W.—Examination for University Medical Scholarship (at Durham).

OFFICERS OF THE UNIVERSITY.

Visitor.

THE BISHOP OF DURHAM.

Governors.

THE DEAN AND CHAPTER OF DURHAM.

Warden.

THE DEAN OF DURHAM.

Sub-Warden.

THE MASTER OF UNIVERSITY COLLEGE.

Senate.

THE WARDEN.
THE PROFESSORS OF DIVINITY, GREEK, MATHEMATICS, HEBREW, AND MEDICINE.
THE PROCTORS.
THE MASTER OF UNIVERSITY COLLEGE.
THE PRINCIPAL OF HATFIELD HALL.
THE PRINCIPAL OF THE COLLEGE OF SCIENCE.
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REV. HENRY ELLERSHAW, M.A.
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FRANK BYRON JEVONS, M.A., D.Litt.
ROBERT ROBY REDMAYNE, M.A.

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GEORGE HARE PHILIPSON, M.A., M.D., D.C.L., F.R.C.P.

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HENRY EDWARD ARMSTRONG, D.Hy., M.R.C.S.
FREDERICK PAGE, M.A., M.D., M.R.C.S.
SAMUEL McBEAN, M.A., M.D.
DAVID DRUMMOND, M.A., M.D., D.C.L.
JAMES MURPHY, M.A., M.D.
THOMAS OLIVER, M.A., M.D., F.R.C.P., F.R.S.E.
GEORGE EDWARD WILLIAMSON; M.A., F.R.C.S.
GEORGE REDMAYNE MURRAY, M.A., M.D., M.R.C.P.
THOMAS WILLIAM McDOWALL, M.D.

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A. BEANLANDS, M.A.
REV. J. T. FOWLER, M.A., D.C.L., M.R.C.S. Eng.

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F. PAGE, M.A., M.D.
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F. PAGE, M.A., M.D.
G. E. WILLIAMSON, M.A., F.R.C.S.

REPRESENTATIVE OF THE COLLEGE OF MEDICINE IN THE SENATE OF THE UNIVERSITY.

WILLIAM CHRISTOPHER ARNISON, M.D., D.C.L., M.R.C.S.

REPRESENTATIVE OF THE COLLEGE OF MEDICINE IN THE BODY OF GOVERNORS OF THE DURHAM COLLEGE OF SCIENCE.

FREDERICK PAGE, M.A., M.D.

REPRESENTATIVE OF THE COLLEGE OF MEDICINE IN THE BODY OF GOVERNORS OF THE NEWCASTLE ROYAL GRAMMAR SCHOOL.

G. H. PHILIPSON, M.A., M.D., D.C.L., F.R.C.P.

AUDITORS.

MESSRS. MONKHOUSE, GODDARD, & CO.

Officers of the College of Medicine are Officers of the University in the Faculty of Medicine.

LECTURERS IN THE COLLEGE OF MEDICINE.

Anatomy	PROFESSOR ROBT. HOWDEN, M.A. Dunelm., M.B. Edin., F.R.S.E.
Physiology	PROFESSOR T. OLIVER, M.A. Dunelm., M.D. Glas., F.R.C.P. Lond., F.R.S.E. G. E. WILLIAMSON, M.A. Dunelm., F.R.C.S. Eng.
Principles and Practice of Medicine	PROFESSOR G. H. PHILIPSON, M.A., M.D., Cantab. et Dunelm., D.C.L. Dunelm., F.R.C.P. Lond.
Principles and Practice of Surgery	PROFESSOR W. C. ARNISON, M.D., D.C.L., Dunelm., M.R.C.S. Eng. F. PAGE, M.A. Dunelm., M.D. Edin.
Chemistry	PROFESSOR P. PHILLIPS BEDSON, M.A., Dunelm., D.Sc. Lond., B.Sc. Vict., F.I.C., F.C.S.
Anatomical Demonstrations	PROFESSOR ROBT. HOWDEN, M.A., M.B., F.R.S.E.
Public Health	H. E. ARMSTRONG, D.Hy., M.R.C.S. Eng.
Midwifery and Diseases of Women and Children	T. C. NESHAM, M.D. Edin. et Dunelm.
Medical Jurisprudence	J. MURPHY, M.A., M.D. Dub. et Dunelm.
Biology	PROFESSOR M. C. POTTER, M.A. Cantab. et Dunelm., F.L.S.
Materia Medica and Therapeutics	S. McBEAN, M.A. Dunelm., M.D. St. And.
Pathology	D. DRUMMOND, M.A., M.D. Dub. et Dunelm., D.C.L. Dunelm.
Operative Surgery	PROFESSOR W. C. ARNISON, M.D., D.C.L., Dunelm., M.R.C.S. Eng. F. PAGE, M.A. Dunelm, M.D. Edin.
Practical Physiology	G. E. WILLIAMSON, M.A. Dunelm., F.R.C.S. Eng. PROFESSOR T. OLIVER, M.A. Dunelm., M.D. Glas., F.R.C.P. Lond., F.R.S.E.
Joint Lecturer in Physiological Physics and Chemistry	ROBERT A. BOLAM, M.B., B.S. Dunelm.
Psychological Medicine	T. W. McDOWALL, M.D. Edin.
Physics	PROFESSOR H. STROUD, M.A. Cantab. et Dunelm., D.Sc. Lond., F.Ph.S.L.
Natural History	PROFESSOR G. S. BRADY, LL.D., M.D. St. And., F.R.S., F.L.S.
Comparative Pathology	PROFESSOR GEORGE R. MURRAY, M.A. Cantab. et Dunelm., M.D. Cantab., M.R.C.P. Lond.
Curator of Museum	PROFESSOR ROBT. HOWDEN, M.A., M.B., F.R.S.E.
Demonstrator of Anatomy	WILLIAM TURNBULL, M.B., B.S. Dunelm.

STAFF OF THE ROYAL INFIRMARY.

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DENNIS EMBLETON, M.D., F.R.C.P.

Consulting Surgeon.
CHARLES JOHN GIBB, M.D., M.R.C.S.

Consulting Dental Surgeon.
EDWARD FOTHERGILL, L.D.S. Eng.

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D. DRUMMOND, M.A , M.D., D.C.L.
T. OLIVER, M.A., M.D., F.R.C.P., F.R.S.E.
J. LIMONT, M.A., M.B., B.Sc., M.R.C.P.

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G. H. HUME, M.D., F.R.C.S. Ed., D.C.L.
F. PAGE, M.A., M.D., M.R.C.S.
G. E. WILLIAMSON, M.A., F.R.C.S.

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J. R. MORISON, M.D., F.R.C.S.
W. G. BLACK, F.R.C.S. Ed.
WALTER RIDLEY, M.B., M.S., F.R.C.S.
ALBERT M. MARTIN, M.B., B.S.

Pathologist.
THOMAS BEATTIE, M.D.

Pathological and Analytical Chemist.
P. P. BEDSON, D.Sc. Lond., F.I.C., F.C.S.

Dental Surgeon.
R. L. MARKHAM, L.D.S.

Surgical Registrar.
W. H. VICKERY, F.R.C.S.

Anæsthetist.
W. D. ARNISON, M.D., B.S., M.R.C.S., L.R.C.P.

Senior House Physician.
JOHN CLAY, M.B., B.S.

Junior House Physician.
PERCIVAL DAVIDSON, M.B., B.S.

House Surgeons.
W. H. ROWELL, M.B., B.S.
E. J. BREWIS, M.B., B.S.
EDWARD FIELDEN, M.B., B.S.
A. H. HOBBS, M.B., B.S.

Eye Department.
G. E. WILLIAMSON, M.A., F.R.C.S.

Throat and Ear Department.
WALTER RIDLEY, M.B., M.S., F.R.C.S.

Skin Department.
JAS. LIMONT, M.A., M.B., B.Sc., M.R.C.P.

University of Durham College of Medicine.

DEGREES IN MEDICINE, SURGERY, AND HYGIENE, AND DIPLOMA IN PUBLIC HEALTH.

One Diploma and six Degrees are conferred by the University of Durham, viz. :—The Diploma in Public Health, and the Degrees of Bachelor in Medicine, Doctor in Medicine, Bachelor in Surgery, Master in Surgery, Bachelor in Hygiene, and Doctor in Hygiene. These degrees are open both to Men and Women.

Attendance at the College of Medicine for one year is equivalent to one year of residence at Durham for the Degree of B.A.

SCHOLARSHIPS, MEDALS, AND PRIZES.

A Gold Medal is awarded every year to the Candidate who presents the best Essay for the Degree of M.D., provided that the Essay is judged to be of sufficient merit.

At the University of Durham.

Four Scholarships of £25 a year each were set apart in 1856 for Students in Medicine, and are tenable for four years by Students pursuing their medical studies and not of sufficient standing to proceed to a Degree in Medicine.

Regulations for the Medical Scholarships.

1. In ordinary cases such Medical Scholarships as shall have become vacant shall be filled up at the beginning of Michaelmas Term in each year.

2. The candidates for the Medical Scholarships shall be those persons who have not kept more than one term by residence in the University, or those who are desirous of being admitted as Medical Students.

3. Each candidate must produce to the Warden satisfactory testimonials of character.

4. Unless there be special Examiners appointed for the purpose, the Examiners for the First Public Examination in Arts shall be Examiners for the Medical Scholarships.

5. The subjects of Examination shall be the Latin Language, some portion of English History, Arithmetic, and English Composition. The Examiners shall report to the Warden and Senate for Election the Students who shall pass the best Examination. The books and particular portions of English History shall be fixed by the Warden and Senate three months at least before the Examination.

6. If no candidate duly qualified presents himself, the Warden shall have power to appoint a second Examination at a later period of the Academical year. If a student is elected at this Examination, he shall be regarded as if he had obtained the Scholarship in the preceding Michaelmas Term; but no one shall be elected unless he passes a satisfactory Examination.

7. The Medical Scholarships shall be tenable for four years by Medical Students who reside and pursue their studies either at Durham or Newcastle-upon-Tyne, as Medical Students, provided that they produce satisfactory testimonials of character, and pass the Public Examination in a creditable manner.

8. If a Scholarship be forfeited by failure at the Examination at the end of the first year, or from any other cause before the end of the three years, the Warden and Senate shall have power to assign the Scholarship for the remaining part of the period to a student not already a Scholar, who is recommended as having passed the best examination at the end of his first year.

The subjects of the Examination, which will be commenced on Wednesday, October 14th, 1896, are:—The Gospel of St. Luke in Greek; Latin Grammar; Tacitus, Annals I.; Virgil, Æneid, Books V., VI.; Arithmetic and Algebra; Euclid, Books I. and II.; English History: James I. to end of James II.

The subjects for the Examination to be held on October 13th, 1897, will be the same as those given above, excepting the following:—English History: William III. to end of George II.

AT THE COLLEGE OF MEDICINE.

DICKINSON MEMORIAL SCHOLARSHIP.—The friends of the late JOHN DICKINSON, M.B. Dunelm., who was Medical Officer of the Universities' Mission to Central

Africa in 1866, desiring to testify their admiration for his character, and their sorrow at his untimely death, subscribed a sum of £300, to which a further sum of £65 10s. has lately been added, accruing from the years in which the Scholarship was not awarded, Mrs. WALKER and Mr. WM. HENRY DICKINSON further contributing to raise the amount to £400. The interest of this amount is awarded annually after examination, at the end of the Summer Session. Any Full Student of the College of Medicine who has passed the Intermediate Examination of any of the Licensing Bodies named in Schedule A of the Medical Act, 1858, is eligible for the Scholarship. The subjects of Examination are Medicine, Surgery, Midwifery, and Pathology. With this Scholarship is also presented a Gold Medal. Candidates for the Dickinson Scholarship must enter for the Examinations in their fifth year, and the years must have been consecutive.

TULLOCH SCHOLARSHIP.—The interest of the sum of £400, bequeathed by the late BENJAMIN TULLOCH, Esq., Surgeon, Newcastle-upon-Tyne, is awarded annually at the end of the Winter Session to the Full Student who passes the best examination in the subjects of Anatomy, Physiology, and Chemistry. This Scholarship may be entered for by Students at the end of their first year, or at the end of their second year of study; but no Student is eligible who commenced his medical curriculum more than two academical years before the date of Examination.

CHARLTON MEMORIAL SCHOLARSHIP.—The friends (professional and private) of the late EDWARD CHARLTON, M.D. Edin., D.C.L. Dunelm., President of the College, and Professor of Medicine, to show their appreciation of his professional and scientific worth, and to perpetuate his memory, contributed a sum of money, by means of which his portrait has been placed in the Library of the Royal Infirmary, Newcastle-upon-Tyne, and £700 invested to found a Scholarship in Medicine in the College, to be awarded annually at the end of the Winter Session after examination. The fund was invested in the purchase of £464 North Eastern Railway Consols; a further sum of

£37 16s. arising from a year in which the Scholarship was not awarded has since been invested in the purchase of £27 North Eastern Railway Consols, thus raising the capital of the Scholarship to the sum of £491 North Eastern Railway Stock. The Scholarship is open to Full Students of the College entered for the Class on the Principles and Practice of Medicine, and may be competed for by a Full Student at the end of his fourth or fifth Winter—the Winters must have been consecutive.

GIBB SCHOLARSHIP.—Dr. GIBB, one of the oldest Members of the College, having presented the sum of £500 for the purpose, the interest on this sum is awarded annually as a Scholarship in Pathology, at the end of the Summer Session, to the Full Student who passes the best examination in that subject, but no Student shall be eligible after the completion of his curriculum.

LUKE ARMSTRONG MEMORIAL SCHOLARSHIP. — The friends of the late Dr. LUKE ARMSTRONG, who was connected with the College as Lecturer for a period of twenty-four years, desiring to testify their esteem and to perpetuate his memory, contributed £680, which has been invested to found a Scholarship. The Scholarship is open to all the Candidates for the Degree of Bachelor in Medicine, and will be awarded to the Candidate who obtains highest marks in the Honours Division in the Final Examinations in April and September in each year. The successful Candidate will be styled the Luke Armstrong Scholar.

STEPHEN SCOTT SCHOLARSHIP.—STEPHEN SCOTT, Esq., of Harrogate, formerly of Newcastle-upon-Tyne, has generously presented to the College of Medicine the sum of £1,000, for the purpose of founding a Scholarship. The Competition shall be by an original Essay. By the terms of Mr. Scott's gift, the subject of the Essay was at first limited to "Hernia and Allied Subjects," but since then he has kindly consented to extend the scope of the Essay so as to include any Surgical Subject. Any Graduate in Medicine or Surgery of the University of Durham, or any Student of the University of Durham College of Medicine shall be eligible to compete for the Scholarship, provided that such Student shall have kept at least one Academical year in attendance at the College, and that in any case his age does not exceed 30 years at the time when the Essay is sent in.

The Competition shall take place every year, and the Essays must be presented not later than the 15th day of July.

The Essay shall be illustrated by drawings, preparations, and specimens at the choice of the Essayist. The Judges shall be the Lecturers on Surgery. The subject of the proposed Essay shall be submitted for the approval of the Professor of Surgery. The Scholarship shall not be awarded unless the Examiners deem the Essay of sufficient merit, and in case it is at any time withheld, the proceeds shall be applied to the purposes of the Scholarship in such manner as the Trustees may direct, either by addition to the capital sum, or by giving an additional prize on any other occasion when a second Essay shall be deemed to deserve it. The Essays shall be the property of the College of Medicine, and also all specimens, preparations, etc., illustrating them, but the writer of the successful Essay shall be permitted to publish it.

HEATH SCHOLARSHIP.—The late GEORGE YEOMAN HEATH, M.D., M.B., D.C.L., F.R.C.S., Professor of Surgery in the University of Durham, and President of the University of Durham College of Medicine, has bequeathed the sum of £4,000, to found a Scholarship in Surgery, the interest to be awarded every second year.

In accordance with the will of the late G. Y. HEATH, the Trustees of the Heath Scholarship will award and pay to the writer of the best original Essay on "Congenital deformities—their pathology and treatment," the sum of £200.

All Graduates in Medicine or in Surgery of the University of Durham are eligible to compete for this prize.

The Essay must be type-written or printed, and delivered to the Trustees not later than March 31st, 1898. The Essay, together with any Specimens, Drawings, Casts, Microscopical Preparations, or other means of illustration accompanying it, will become the property of the College of Medicine, Newcastle-upon-Tyne.

By permission, the Essay may be printed for general circulation by the Heath Scholar.

W. C. Arnison, M.D., } *Trustees of the*
Frederick Page, M.D., } *Heath Scholarship.*

Gibson Prize.—Under the will of the late Dr. Charles Gibson the College has lately come into the possession of the sum of £225—to be employed in founding an annual prize in the subject of Midwifery and Diseases of Women and Children. Dr. Gibson entered the Newcastle School of Medicine and Surgery as a Student in 1837—three years after the foundation of the School. In 1851, he was appointed to the chair of Midwifery and Diseases of Women and Children—a post which he held until his death in April, 1894.

College Prizes and Certificates.—In connection with each of the Courses of Lectures named below, Prizes of Books and Honours Certificates are awarded at the end of the Session in which the Course is given, to those Students attending the Course who pass the best Examination in the subject treated of.

WINTER SESSION.

1.—Anatomy { Senior Class. / Junior Class.
2.—Dissections { Senior Class. / Junior Class.
3.—Physiology.
4.—Chemistry.
5.—Physics.
6.—Medicine.
7.—Surgery.
8.—Midwifery and Diseases of Women and Children.
9.—Public Health.
10.—Regional Anatomy.

SUMMER SESSION.

1.—Chemistry (Practical).
2.—Physiology (Practical) { Senior Class. / Junior Class.
3.—Physics (Practical).
4.—Materia Medica and Therapeutics.
5.—Medical Jurisprudence.
6.—Pathological Anatomy.
7.—Operative Surgery.
8.—Biology.
9.—Psychological Medicine.

The Prizes will consist of Books. The Prize in each Class will be awarded to the Student who obtains the highest marks in the Class Examination, provided that he obtains not less than 80 per cent. of the full marks obtainable. The Certificates will be divided into three Classes; viz. :—First-Class Honours, corresponding to marks of 80 per cent. and upwards; Second-Class Honours to marks of from 75 to 80 per cent.; and Third-Class Honours to marks of from 70 to 75 per cent.

Students who have attended a First-year's Course only, are eligible for these Prizes in the Junior Classes of Anatomy and Dissections and in those of Chemistry, Physics, Practical Chemistry, Practical Physics, and Biology; Second-year Students only in the Classes of Physiology and Materia Medica, and in the Senior Classes of Anatomy and Dissections; and Students under five years of study only for the Prizes in the remaining Classes. Students, after taking out a Second Course of Lectures, will not be allowed to compete for these Prizes, except in Medicine and Surgery.

The Council reserve the right of witholding any of the above Scholarships, Prizes, or Certificates, when a satisfactory degree of proficiency is not shown at the Examination, and no Scholarship or Medal can be competed for by any Student who has obtained it in any previous year.

AT THE ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

GOYDER MEMORIAL SCHOLARSHIP.—The interest of the sum of £325, contributed by friends (professional and private) of the late CHARLES McIVOR GOYDER, Surgeon, as a memorial, whereby his memory may be perpetuated, and Medical Students incited to emulate his meritorious example, will be awarded annually to the Student who shall most distinguish himself in Clinical Medicine and Clinical Surgery at the Royal Infirmary, Newcastle-upon-Tyne, under the following Regulations, viz.:—

1st. That the Scholarship be attached to the Royal Infirmary, Newcastle-upon Tyne, and be termed the Goyder Memorial Scholarship.

2nd. That the Subjects of Examination be Clinical Medicine and Clinical Surgery.

3rd. That the Scholarship be open for competition to Students during their fourth and fifth years only of medical study; that the Scholarship shall not be taken twice by the same Student; and that no Student be eligible for examination unless he be a Full Student, both at the College of Medicine and at the Royal Infirmary, Newcastle-upon-Tyne.

4th. That the Examination for the Scholarship be in the hands of the Honorary Staff of the Royal Infirmary, Newcastle-upon-Tyne, and that the Honorary Staff shall have power, if the Candidates do not show sufficient merit, to withhold the Scholarship. In the following year the Scholarship not awarded shall be competed for, in addition to the Scholarship of that year, but both shall not be held by the same individual.

5th. That, with the permission of the Authorities of the University of Durham College of Medicine, the Goyder Memorial Scholarship be presented at the annual distribution of the College Scholarships and Prizes.

COLLEGE AND INFIRMARY OFFICES TENABLE BY STUDENTS OF THE COLLEGE.

Assistant Demonstrators of Anatomy.—Assistant Demonstrators are appointed yearly by the Council of the College to assist in the Dissecting Room. They each receive an honorarium of £5. Students who have passed the First and Second Examinations of the Conjoint Board in England, or of the Durham University, are eligible.

*Two or more Prosectors for the Lectures on Anatomy are selected every Session from amongst the Senior Students.

*Assistant-Demonstrators of Physiology.—Assistant-Demonstrators to the Lecturers on Practical Physiology are chosen yearly by the Council of the College, from amongst Students who have passed a Primary Examination.

*Assistant-Demonstrators of Pathology.—Assistant-Demonstrators to the Lecturer on Pathology are appointed yearly from amongst Students who have passed a Primary Examination.

*Clinical Clerks and Dressers are appointed periodically.

*Assistants to the Pathologist.—Assistants in the Pathological Department of the Royal Infirmary are appointed in March, June, September, and December.

* These appointments are unpaid, but confer certain privileges and offer great advantages for practical study.

*ASSISTANTS TO THE DENTAL SURGEON.—Two Assistants are appointed in March, June, September, and December.

*ASSISTANTS IN THE EYE DEPARTMENT.—Two Assistants are appointed in March, June, September, and December.

*ASSISTANTS IN THE SKIN DEPARTMENT.—Three Assistants are appointed in March, June, September, and December.

*ASSISTANTS IN THE THROAT, NOSE AND EAR DEPARTMENT.—Three Assistants are appointed in March, June, September, and December.

The Office of Resident Medical Assistant to the City Hospital for Infectious Diseases is open to qualified Students. The holder is appointed for one year, at a salary of £50, with board, lodging, etc., and is eligible for re-election for a further period of one year, at £70. This appointment affords an excellent opportunity for the study of Infectious Fevers.

LIBRARIES AND MUSEUMS.

The MEDICAL LIBRARY at the Royal Infirmary contains about 6,000 volumes. New books are constantly being added, whilst the series of works of reference is very comprehensive. The Library is open free to all Students on deposit of one guinea caution-money with the Librarian, who attends on Tuesdays, Thursdays, and Saturdays, from 11 a.m. to 12 noon.

The LIBRARY at the College is provided with standard medical books for daily reference, and the ordinary medical journals. Books, *except the ordinary class text-books*, may be obtained for home use. A Library and Museum fee of ten shillings a year is charged in the case of Students who take only a part of their curriculum at Newcastle. In the case of Full Students of the College the fee is a composition one of fifteen shillings. The sum so obtained is exclusively utilised for the purpose of maintaining and increasing the Library, and the collection of Anatomical Preparations, Materia Medica Specimens, etc., which are specially set apart for the use of the Students.

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* These appointments are unpaid, but confer certain privileges and offer great advantages for practical study.

The LIBRARIES OF THE DURHAM COLLEGE OF SCIENCE and of the LITERARY AND PHILOSOPHICAL SOCIETY are accessible to Students. The Library of the latter contains about 50,000 volumes of general and special literature, and a Reading Room, provided with the ordinary magazines and periodical literature. It is open to Students on payment of one guinea annual subscription.

The MUSEUMS OF PATHOLOGY, ANATOMY, MATERIA MEDICA, AND HYGIENE, at the College, are open to Students during the same time as the College. A Students' Catalogue will be issued shortly, to be used in illustration of the text-book descriptions of diseased structures.

A LABORATORY has recently been fitted up in the College of Medicine with all the apparatus required for the Practical Study of Bacteriology. This Laboratory will be open to members of the class each day during January, February, and March.

A MUSEUM OF GEOLOGY AND NATURAL HISTORY in the Durham College of Science is open Daily.

DEPARTMENTS OF PRACTICAL STUDY.

IN THE COLLEGE OF MEDICINE.

PRACTICAL ANATOMY, under the superintendence of Professor Howden, aided by Demonstrators, is carried on during the winter daily from 9 a.m. till 5 p.m., except on Saturdays, when the Dissecting Room is closed at noon. Dissection is also carried on in the summer.

PRACTICAL PHYSIOLOGY.—A complete course of Practical Physiology is given during the summer in the Physiological Laboratory. Students desiring to undertake original investigations, or to practice physiological methods, may be admitted to work in the Laboratories on the fulfilment of certain conditions. Application in all cases must be made to the Professor.

PRACTICAL PATHOLOGY.—A course of Practical Pathology is conducted during the Summer Session in the Pathological Laboratory. On application to the Lecturer arrangements may be made for advanced or research work in Morbid Histology or Chemical Pathology.

OPERATIVE SURGERY is taught during the Summer Session on the dead body by the Lecturers on Surgery.

PRACTICAL CHEMISTRY, under the superintendence of Professor BEDSON, M.A., D.Sc., assisted by Demonstrators, is taught in the Durham College of Science. The Laboratories are appointed so as to meet the requirements of all classes of Students, and to provide facilities for research. Each Student has a fully-fitted bench to himself, provided with all the necessary apparatus and reagents. The Laboratories are open daily from 9·30 a.m. till 4·30 p.m. during both winter and summer.

PRACTICAL PHYSICS, under the superintendence of Professor H. STROUD, M.A., D.Sc., assisted by Demonstrators, is taught at the Durham College of Science. Special Laboratory Courses are arranged for Students desiring to study some one branch of Physics, and opportunity is afforded for undertaking research. The General Laboratory course is given during the Summer Session. The Laboratory is open daily during the College Sessions.

PRACTICAL BIOLOGY.—A Course of Lectures on Biology, with Practical Work in the Laboratory, is conducted by Professor M. C. POTTER, M.A., F.L.S., at the Durham College of Science. The Laboratory is well lighted and adapted for the requirements of Students; it is fitted up with the necessary models and apparatus, and every opportunity is given for the prosecution of research. The Laboratory is open daily during the College Sessions.

PRACTICAL BACTERIOLOGY.—A Course of Lectures on Comparative Pathology, with practical instruction in Bacteriology, is given during the months of January, February, and March, in the Bacteriological Laboratory, and a short course of Lectures on Elementary Bacteriology with demonstrations will be given as a part of the Public Health course, during October, November, and December, by Professor MURRAY, M.A., M.D.

IN THE ROYAL INFIRMARY.

PATHOLOGY.—Demonstrations on Morbid Anatomy are given by the Pathologist at the Royal Infirmary at 11·30 a.m. as opportunity occurs.

DISEASES OF THE EYE may be studied under Mr. Williamson, in a special department at the Royal Infirmary. Demonstrations are given on Mondays at 12 o'clock, and on Thursdays at 9 o'clock.

DISEASES OF THE SKIN.—A special department for Diseases of the Skin is conducted by Dr. Limont at the Royal Infirmary. Demonstrations are given in the Out-patient Department, on Fridays, from 10 to 12 o'clock.

DISEASES OF THE THROAT, NOSE, AND EAR.—A special department for Diseases of the Throat, Nose, and Ear is conducted by Mr. Walter Ridley, at the Royal Infirmary. Demonstrations are given in the Out-patient Department, on Thursdays, from 10 to 12 o'clock.

DEPARTMENT FOR DISEASES OF WOMEN.—Demonstrations in the Out-patient Department by the Physicians on Tuesdays at 10 a.m. Clinical Lectures by the Surgeons once a fortnight and Ward Demonstrations as opportunity offers.

PHARMACY is taught in the Dispensary of the Royal Infirmary without extra fee in the case of Full Students of the College.

OUT-DOOR SANITARY PRACTICE IN THE DEPARTMENT OF THE MEDICAL OFFICER OF HEALTH FOR NEWCASTLE-UPON-TYNE.

The Course of six months extends from the end of the Christmas vacation to the close of the Winter Session, is resumed on May 1st, and continued throughout the Summer Session. Application to be made to Dr. H. E. ARMSTRONG, Medical Officer of Health, Town Hall, Newcastle-upon-Tyne. Fee, eight guineas.

CLINICAL INSTRUCTION IN INFECTIOUS DISEASES.—A Course of Lectures and Clinical Instruction at the City Hospital for Infectious Diseases, Walker Gate, will be given during the first half of the Winter Session by Dr. HENRY E. ARMSTRONG, Medical Superintendent. Fee, two guineas.

Opportunities for practical study, of which Students are strongly recommended to take advantage, are offered by the following Institutions:—The Dispensary, Hospital for Infectious Diseases, Eye Infirmary, Children's Hospital, Coxlodge Lunatic Asylum, Dunston Lunatic Asylum, Durham County Asylum, and the Northumberland County Asylum.

IN OTHER INSTITUTIONS.

PSYCHOLOGY.—Clinical Instruction is given weekly, during the summer, in the wards of the Northumberland County Asylum, Morpeth, by the Medical Superintendent, Dr. T. W. MCDOWALL. Three months' Resident Clinical Clerkship in this Asylum, or at the Dunston Lodge Asylum, or at the Durham County Asylum, or at the West Riding Asylum, Menston, near Leeds, or at the City Asylum, Gosforth (where only one such Clerk is taken at a time), may be substituted for three months' attendance on Hospital Practice in the curriculum for the Degrees in Medicine of the University of Durham.

VACCINATION.—Certificates in Vaccination are given by Mr. JOHN HAWTHORN, M.R.C.S., Government Teacher and Examiner in Vaccination, 21, Nun Street, Newcastle, after a Course of Instruction, which is given on Wednesdays, between 3 and 4 o'clock p.m. Each Student must attend one day a week for six consecutive weeks. Fee, one guinea.

THE NEWCASTLE LYING-IN HOSPITAL, New Bridge Street, which contains 12 beds, and the Out-Lying-in Charity connected with it—in which 500 cases are annually attended, are both available, without fee, for the practical study of Midwifery, by Senior Students of the College. The cases are attended under the supervision of the Medical Officers of the Charities. Application must be made to the Lecturer on Midwifery, Dr. NESHAM.

Pharmacy.—Practical Pharmacy is taught at the Dispensary.

Chemistry, Physics, and Zoology, are taught theoretically and practically by the Professors of the subjects in the Durham College of Science.

STUDENTS' RESIDENCES.

Residence for Men Students.—University Hostel, Brandling Park, Jesmond, Newcastle-upon-Tyne. Master: C. S. Terry, M.A., Clare College, Cambridge. This Hostel is recognised by the Council as a Hall of Residence for Undergraduates in the Durham University College of Medicine. It is situated within seven minutes' walk of the College, and adjoins the gardens of Brandling Park and the Town Moor. The Hostel Fee for Board and Residence (exclusive of personal laundry) is 42 guineas for the Winter Session, and 21 guineas for the Summer Session.

Residence for Women Students. — Eslington Tower, Newcastle-upon-Tyne. Principal: Miss Royce. This house, which is recognised by the Council of the College as a residence for Women Students, is pleasantly situated, within a few minutes' walk of the College, and has been specially fitted up for the accommodation of Students. It contains, in addition to the general dining and sitting rooms, a very large study, several small single rooms, and combined study bedrooms, to be shared by two or three Students—all most comfortably furnished, and affording every facility for successful work. The inclusive term fee for board and residence will vary with the room chosen, and can be calculated at from 15s. to £1 1s. per week.

Lodgings.—A list of suitable lodgings is kept by the Secretary of the College.

INFORMATION FOR STUDENTS BEGINNING MEDICAL EDUCATION.

All Students before entering the Medical Profession are required—

(A) To pass a Preliminary or *Registration* Examination in General Education.

The Examination of the University of Durham will be commenced at Durham, on Tuesday, September 22nd, 1896, and again on Tuesday, March 23rd, 1897, and on Tuesday, September 21st, 1897.

The Examination will be called the *Examination for a Certificate of Proficiency in General Education.* This Examination will be accepted by the General Medical Council as a Registration Examination. The following are regulations in regard to it :

1. The Examination shall be held in Durham twice a year, in the months of March and September, and shall be conducted entirely in writing.

2. Each Candidate shall pay a fee of £1 on each separate occasion on which he shall desire to be examined.

3. Every person intending to present himself for examination shall send notice of his intention to the Examination Secretary, Rev. J. R. Shortt, M.A., the University of Durham, one month before the day of Examination, stating the particular subjects in which he desires to be examined and enclosing the required fee.

4. The subjects of examination, until further notice, shall be the following :

A.—Necessary Subjects.

i. English.—Writing from dictation ; Grammar ; composition of a short essay ; analysis and parsing of sentences ; and knowledge of a portion of some special author, to be announced at least six months before the date of the Examination. The author selected for 1896 and 1897 is Shakespeare, *Richard II.*

ii. Geography.—Questions will be set in general Geography, particular regard being paid to that of the British Isles, and of some other selected country. The particular country selected for 1896 and 1897 is *South America.*

iii. Arithmetic.—Simple and Compound Rules, Vulgar and Decimal Fractions, Practice, Proportion, and Interest.

B.—Optional Subjects.

iv. English History.—General knowledge of a lengthened period, with special attention to a selected portion. The period chosen for 1896 and 1897 is that from James I. to James II., with special attention to the reign of Charles I.

v. Latin.—Grammar ; translation into English of specified books, and also of passages from books not specified ; translation into Latin of easy English sentences. The author selected for 1896 and 1897 is Virgil, *Aeneid, IX., X.*

vi. Religious Knowledge.—The historical part of the New Testament, or of some specified portion of the Old Testament; and more detailed knowledge of some stated book. For 1896 and 1897 the portion chosen is the history contained in *Ruth* and *Samuel I.* and *II.*, with special knowledge of *Samuel II.*

vii. Euclid.—Books I., II., III., with easy deductions.

viii. Algebra.—Up to and including Simple Equations.

ix. Elementary Mechanics, including the Elements of Statics, Dynamics, and Hydrostatics.

x. Greek.—Grammar; translation into English of some specified books, and also of passages from books not specified; translation of easy English sentences into Greek. The author selected for 1896 and 1897 is Xenophon, *Anabasis, II.* and *III.*

xi. French.—Grammar; translation into English of some specified books, and also of passages from books not specified; translation from English into French. The author selected for 1896 and 1897 is P. Mérimée, *Colomba.*

xii. German.—Grammar; translation into English of some specified books, and also of passages from books not specified; translation from English into German. The author selected for 1896 and 1897 is Schiller, *Wilhelm Tell.*

In the awarding of Certificates, considerable weight throughout the Examination shall be given to the grammar and spelling of the candidates' answers.

This Certificate will be accepted by the General Medical Council as a Registration Examination, provided that the Candidate shall have passed in Division A, and shall also have satisfied the Examiners in subjects v., vii., viii., and in any *one* of the three x., xi., and xii., at the same Examination.

(B.) To register on the books of some University granting Medical Degrees, or of some recognised School of Medicine.

Having passed a Preliminary Examination, the Student should next communicate with the Secretary of the College of Medicine, and enter his name on the books of the College, paying the fees required for lectures. (See pages 48-50.) He will then receive a certificate from the Secretary of his having begun medical study, together with a form of application for registration in the books of the General Medical Council.

(C.) To register on the books of the General Medical Council.

N.B.—Attendance upon Medical Lectures, or any Medical Study previous to this last-named Registration (C) is not recognised by any Examining Board. Attendance upon Lectures, etc., may be commenced at any time after the Preliminary Examination.

Intending Students are recommended to pass the Examination enumerated in the Regulations on pages 63 and 64.

The Student should forward to the Registrar of the Branch Council for England, 299, Oxford Street, London, W.:—(1) the form of application for registration, filled up according to the printed directions attached to it, together with (2) the certificate of having begun Medical Study, and (3) a certificate of having passed the Preliminary Examination. A certificate of registration, and the certificate of having passed the Preliminary Examination will be returned to the Student by the Registrar of the Council.

N.B.—Unless the Student enter his name at a School of Medicine, and forward the necessary papers (1, 2, and 3, above-named) to the Registrar of the General Council in London, within *fifteen* days from the commencement of his first Winter or Summer Session, his course of study for that Session will not be recognised by the Council.

For the Degrees of Bachelor and Doctor in Hygiene, see Regulations, pages 75-80.

For the Diploma in Public Health, see Regulations, page 80.

DENTAL COURSE.

Students can fulfil the following portion of the Curriculum required for the Licence in Dental Surgery of the Royal College of Surgeons of England, at the University of Durham College of Medicine, and the Royal Infirmary, Newcastle-upon-Tyne, viz:—

Anatomy	1	Course,	6	Months.
Physiology	1	,,	6	,,
Practical Physiology	1	,,	3	,,
Surgery	1	,,	6	,,
Medicine	1	,,	6	,,
Chemistry	1	,,	6	,,
Materia Medica	1	,,	3	,,
Practical Chemistry...	1	,,	3	,,
Dissections	12	Months.		
Surgical Hospital Practice	2	Winter Sessions.		
Surgical Clinical Lectures	2	,, ,,		

The Composition Fee for the above Course of Lectures, etc., at the College of Medicine, is thirty guineas, and for Hospital Practice, etc., at the Royal Infirmary, twelve guineas. An additional fee of two guineas a year during the period of attendance on Hospital Practice is payable to the Committee of the Infirmary.

Particulars may be obtained on application to the Secretary of the College.

REGULATIONS FOR STUDENTS COMMENCING PROFESSIONAL STUDY ON OR AFTER JANUARY 1st, 1892.

All Students before entering the Medical Profession are required—

(*a*) To pass a Preliminary or *Registration* Examination in General Education. See pages 24-26.

(*b*) To Register on the books of some University granting Medical Degrees, or of some recognised School of Medicine. See page 26.

(*c*) To Register on the books of the General Medical Council. See page 26.

(*d*) The Student, when registered by the General Medical Council, is considered to have commenced his Professional Education, of which the curriculum for ordinary qualifications must be a period of *bonâ fide* study during not less than five years.

(*e*) Graduates in Arts or Science of any University recognised by the Medical Council who shall have spent a year in the study of Physics, Chemistry, and Biology, and have passed an Examination in these subjects for the Degrees in question, shall be held to have completed the first of the five years of Medical Study.

For Degrees in Medicine, the University of Durham requires certificates of attendance upon the following

Courses of Study (all of which Courses, with the exception of Practical Midwifery, Practical Pharmacy, and Vaccination, must be attended at one or more recognised Medical Schools):—

Anatomy	2 Courses, 6 Months each.
Dissections	2 do. 6 do.
Physiology	1 Course, 6 Months.
Chemistry	1 do. 6 do.
Physics	1 do. 6 do.
Elementary Biology	1 do. 3 do.
Materia Medica, Therapeutics, and Pharmacology	1 do. 3 do.
Practical Physiology	2 Courses, 3 do.
Practical Chemistry	1 Course, 3 do.
Practical Physics	1 do. 3 do.
Practical Pharmacy	1 do. 3 do.
Medicine	2 Courses, 6 Months each.
Surgery	2 do. 6 do.
Public Health	1 Course.
Forensic Medicine	1 do. 3 Months.
Midwifery and Diseases of Women and Children	1 do. 3 do.
Pathology	1 do. 3 do.
Clinical Medical Lectures Clinical Surgical Lectures	2 Winter Sessions. 2 Summer do.
*Medical Hospital Practice Surgical Hospital Practice	3 Winter do. 2 Summer do.
‡ Medical Clinical Clerkship	6 Months.
Surgical Dressing	6 do.
†Post-Mortem Demonstrations	2 Winter Sessions. 2 Summer do.
Clinical Obstetrics	3 Months.
Personal attendance on not less than twenty cases of Midwifery	
‡ Vaccination (Certified by Licensed Teacher of Vaccination).	
Mental Diseases	1 Course, 3 Months.

‡ Infectious Diseases—A Course of Clinical Instruction comprising the observation of not less than 20 cases.

* Three months of a resident Clinical Clerkship in the City Lunatic Asylum, or at Dunston Lodge, or at the Durham County Asylum, or at the Northumberland County Asylum, Morpeth, or at the West Riding Asylum, Menston, near Leeds, may be substituted for three months of Hospital Practice.

† Students must show a certificate of having attended not less than 25 post-mortem demonstrations.

‡ The fees for these courses of instruction are indicated on pages 49 and 50.

For Degrees in Surgery, in addition to the above, Certificates of Attendance on the following Courses attended at one or more recognised Medical Schools are required, viz. :—

Operative Surgery	1 Course.
Regional Anatomy	1 Course.

Students are recommended to commence their Course at the beginning of the Winter Session, and to carry out the curriculum on some such plan as the following :—

FIRST WINTER.

Anatomy.
Dissections.
Chemistry.
Physics.

FIRST SUMMER.

Practical Chemistry.
Practical Physics.
Practical Physiology.
Elementary Biology.

SECOND WINTER.

Anatomy.
Physiology.
Dissections.

SECOND SUMMER.

Practical Physiology.
Practical Pharmacy.
Materia Medica, Therapeutics, and Pharmacology.

THIRD WINTER.

Medicine.
Surgery.
Hospital Practice, with Clinical Lectures.
Midwifery and Diseases of Women and Children.
Public Health.
Practical Midwifery.

THIRD SUMMER.

Pathology.
Practical Pathology.
Medical Jurisprudence.
Hospital Practice, with Clinical Lectures.

FOURTH WINTER.

Medicine.
Surgery.
Regional Anatomy.
Hospital Practice, with Clinical Lectures.

FOURTH SUMMER.

Mental Diseases.
Operative Surgery.
Hospital Practice, with Clinical Lectures.

FIFTH WINTER.

Infectious Diseases, and Clinical Lectures.

FIFTH SUMMER.

Clinical Lectures.

BURROUGHS, WELLCOME & Co.
LIBRARY
No.

WINTER SESSION,

1896-97.

COMMENCING OCTOBER 1ST, 1896, ENDING MARCH 31ST, 1897.

LECTURES AND LECTURERS.

ANATOMY.

ROBERT HOWDEN, M.A., M.B., F.R.S.E,
Professor of Anatomy in the University.

During the Session the instruction will consist of :—

I.—A Course of Lectures on Systematic Anatomy.

II.—A Course of Anatomical Demonstrations on recent Dissections.

III.—A Short Course of Lectures on Regional and Applied Anatomy.

IV.—Practical Work in the Dissecting Room and Dissecting Room Demonstrations.

I.—SYSTEMATIC LECTURES.

The Class of Systematic Anatomy is divided into two Sections—JUNIOR and SENIOR.

To the JUNIOR DIVISION a Course of Lectures will be given on the Bones, Joints and Muscles of the Body generally, together with an outline of the Vascular, Nervous and Alimentary Systems.

This class will meet, up to Christmas, on Mondays and Fridays at 12 noon, and after Christmas on Mondays, Wednesdays, and Fridays at 12 noon. In connection with it a course of tutorial instruction will be given in Osteology.

Each Student is recommended to provide himself with what is known as a "half-set" of bones and a disarticulated skull for home study.

To the SENIOR CLASS a Course of Lectures will be given on the Anatomy of the Thorax, Abdomen, Head and Neck and Limbs, including the Brain and Sense Organs. The most important facts regarding the development of the various systems will also be dealt with.

This class will meet, up to Christmas, on Tuesdays, Wednesdays, and Thursdays at 12 noon. After Christmas the Wednesday lectures are discontinued.

Attendance on both Junior and Senior Classes is necessary in order to make up one complete Anatomical Course. Students are recommended to attend these classes in two consecutive years, but both classes may be attended in one year if due cause for the same is shown.

II.—COURSE OF ANATOMICAL DEMONSTRATIONS.

A regular Series of Anatomical Demonstrations will be given in the Lecture Theatre on Mondays, Tuesdays, and Wednesdays at 2·15 p.m. Each Demonstration will be illustrated by a carefully prepared recent dissection of the part. This Course is especially intended for the Senior Students, but the Junior Students are recommended to attend those on the extremities.

III.—LECTURES ON MEDICAL AND SURGICAL APPLIED ANATOMY.

This Course will be given on Thursdays and Fridays at 2·15 p.m. It will, as far as possible, be illustrated by recent dissections, and will also include demonstrations, on the living subject, of Anatomical facts as applied to Medicine and Surgery. This course is intended for Senior Students, in their fourth year, who mean to proceed to the B.S. Examination.

IV.—PRACTICAL WORK IN THE DISSECTING ROOM.

The Dissecting room will be open from 9 a.m. till 5 p.m. on Monday, Tuesday, Wednesday, Thursday and Friday, and from 9 a.m. till 12 noon on Saturday. The Professor of Anatomy and his Assistants will attend in the room daily.

The detailed regulations for the Dissecting Room may be had on application to the Professor.

Instruments.—Each Student must furnish himself with a Dissecting Case containing: four to six Scalpels, a pair of Forceps, a set of Chain Hooks, a pair of Scissors, and a Blow Pipe and Needle.

Text Books.—For *Systematic Anatomy,* any one of the following: Quain's Anatomy. Gray's Anatomy. Morris' Treatise on Anatomy. For *Practical Anatomy,* any one of the following: Cunningham's Dissector's Guide. Ellis' Demonstrations of Anatomy. Heath's Practical Anatomy. For *Regional and Surface Anatomy*: Treves' Surgical Anatomy.

PHYSIOLOGY.

Thomas Oliver, M.A., M.D., F.R.C.P., F.R.S.E., Professor of Physiology in the University, Physician to the Royal Infirmary, Newcastle, and Geo. E. Williamson, M.A., F.R.C.S., Surgeon to the Royal Infirmary, Newcastle.

On Monday, Wednesday, and Friday, at 9·15 a.m.

In addition to the systematic Course of Lectures on Physiology, there will be held special written and *vivâ voce* Examinations for both Senior and Junior Students. In connection with this Course a Revision and Exercise Class is held during the latter part of the Winter Session.

PRINCIPLES AND PRACTICE OF MEDICINE.

G. H. Philipson, M.A., M.D., D.C.L., F.R.C.P., Professor of Medicine in the University, Senior Physician to the Royal Infirmary, Newcastle.

On Monday, Wednesday, and Friday at 5 p.m.

This Course will comprise the consideration of Diseases, arranged under the two Divisions of General and Local.

A succinct account will be given of the principal facts and doctrines of General Pathology in their relation to Etiology, the intimate Constitution, the Anatomical Characters, the Evolution and the Pathogeny of the Disease under consideration; whilst in addition, Diagnosis, Prognosis, Therapeusis, Prophylaxis, Vital Statistics, and Nosology will be reviewed.

The Course will be illustrated by drawings and wax models, and with preparations and recent specimens of morbid structures.

Text Books.—Bristowe's Theory and Practice of Medicine. Robert's Theory and Practice of Medicine. Osler's Principles and Practice of Medicine.

PRINCIPLES AND PRACTICE OF SURGERY.

W. C. Arnison, M.D., D.C.L., M.R.C.S., Professor of Surgery in the University, and Senior Surgeon to the Royal Infirmary, Newcastle, and F. Page, M.A., M.D., Surgeon to the Royal Infirmary, Consulting Surgeon to the Fleming Memorial Hospital for Sick Children, and to the Borough Lunatic Asylum, Coxlodge, Newcastle-upon-Tyne.

On Monday, Wednesday, and Friday, at 6 p.m.

Syllabus of the First Portion of the Course given by Professor Arnison.

Inflammation.
Suppuration—Abscess, Hectic.
Pyæmia.
Sinus—Fistula.
Ulceration.
Mortification.
Erysipelas.
Tetanus.
Wounds, Repair of.
Wounds—Poisoned and Gunshot.
Burns and Scalds.
Fractures, General Pathology of.
Dislocations, General Pathology of.
Diseases of Bones.
Diseases of Joints.
Syphilis.

The second portion of the Course will be given by Mr. Page. It will consist of Lectures upon the Surgical Diseases of the various systems.

Text Books.—Erichsen's Science and Art of Surgery. Walsham's Theory and Practice of Surgery. Treves' System of Surgery. Nettleship's Diseases of the Eye.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

T. C. NESHAM, M.D., M.R.C.S., Physician to the Newcastle Lying-in-Hospital.

On Tuesday, Wednesday, and Thursday, at 3 p.m. during one-half of the Session.

PART I.—Obstetric Anatomy and Physiology of Female Pelvis and Generative Organs. Pregnancy. The Phenomena, Mechanism, and Management of Natural Labour. Anæsthesia in Labour.

PART II.—The Phenomena, Mechanism, and Management of Præternatural Labour—Tedious, Instrumental, and Impracticable; including the operations of Induction of Premature Labour, Turning, Forceps, Craniotomy, Cephalotripsy, etc., accompanied by Demonstrations on the Phantom.

PART III.—Uterine Hæmorrhage, Abortion, Placenta Prævia, Post-partum Hæmorrhage, Puerperal Eclampsia, Septicæmia, Phlegmasia Dolens, Puerperal Insanity, Puerperal Venous Thrombosis and Embolism, etc.

TEXT BOOKS.—Playfair's Theory and Practice of Midwifery. Galabin's Midwifery. Difficult Labour, Herman.

PRINCIPLES OF CHEMISTRY.

Professor BEDSON, M.A., D.Sc., at the Durham College of Science.

On Monday, Wednesday, and Friday, at 11 a.m.

THE GENERAL PRINCIPLES OF CHEMISTRY.—A description of the properties of the commoner elements (non-metallic and metallic), and their more important compounds.

Students are required to satisfy the Professor that they are keeping regular notes of the Lectures, and will be expected to pass satisfactorily at least one of the terminal examinations.

TEXT BOOKS.—Wurtz's Elements of Modern Chemistry. Newth's Inorganic Chemistry. Lupin's Chemical Arithmetic.

ORGANIC CHEMISTRY.

During the Winter Session a Series of Lectures will be given on *Organic Chemistry*. This Class will meet on Tuesday and Thursday, at 11 a.m.

Full Students may attend without payment of fee, and are expected to supplement their attendance on the Course of Lectures on the Principles of Chemistry delivered during the first Winter Session by attending these Lectures.

Text Book.—Perkin and Kipping's Organic Chemistry. Parts I. and II.

PHYSICS.

Professor H. Stroud, M.A., D.Sc., at the Durham College of Science.

On Tuesday, at 10 a.m., during the Winter Session.

The Lectures will be devoted to the demonstration of the principal Laws and Phenomena comprehended in the Synopses of Subjects of the First Examination for the Degree of Bachelor in Medicine. (See page 91.)

Written answers to questions set in the Lectures will be expected to be worked out and brought by Students, and will be returned corrected.

Text Books.—D. E. Jones' Heat and Light. Cummings' Electricity, treated experimentally.

Lectures on

SANITARY CHEMISTRY AND PHYSICS.

Professors Bedson and Stroud, at the Durham College of Science.

(Times to be arranged.)

SANITARY CHEMISTRY.

Laboratory Course.

(Times to be arranged.)

Professor Bedson, at the Durham College of Science.

Books Recommended.—Parkes' Hygiene. Wilson's Hygiene. Stevenson and Murphy's Treatise on Hygiene and Public Health. Wanklyn's Water Analysis. Noel Hartley's Air, Water, and

Disinfectants. Hydrostatics and Pneumatics, Magnus (Longmans). Laws of Health, Corfield (Longmans), and selections from other works.

PUBLIC HEALTH.

Henry E. Armstrong, D.Hy., M.R.C.S., Medical Officer of Health for the City and County of Newcastle-upon-Tyne, and Medical Superintendent of the City Hospital for Infectious Diseases.

* *On Tuesday and Thursday, at 4 p.m.*

Part I.—The Law relating to Public Health.
„ II.—Sanitary Medicine.
„ III.—Practical Hygiene.
„ IV.—Elementary Bacteriology.

*N.B.—On Monday at 3 p.m. during the first half of the Winter Session, Professor Murray will Lecture on Elementary Bacteriology, with demonstrations.

Text Books.—Wilson's Hand-book of Hygiene. Newsholme's Vital Statistics. Louis Parkes' Hygiene and Public Health. Knight's Public Health Acts. Scott's Elementary Meteorology.

COMPARATIVE PATHOLOGY AND BACTERIOLOGY.

George R. Murray, M.A., M.D., M.R.C.P., Heath Professor of Comparative Pathology in the University, Pathologist to the Hospital for Sick Children, Newcastle.

The instruction given in this department will consist of :—

1.—Course of Lectures on Elementary Bacteriology.
2.—Course of Lectures on Comparative Pathology.
3.—Course of Practical Bacteriology.

1.—Elementary Bacteriology.

A Course of Lectures and Demonstrations on Elementary Bacteriology will be given as a part of the Public Health Course on Mondays at 3 p.m. during October, November, and December. This Course may be taken separately on payment of a fee of two guineas.

2.—COMPARATIVE PATHOLOGY.

A Course of Lectures with Demonstrations on Comparative Pathology will be given on Monday, Wednesday, and Friday at 2 p.m. during January, February, and March. This Course may be taken separately on payment of a fee of three guineas.

3.—PRACTICAL BACTERIOLOGY.

This Course will be given on Monday, Wednesday, and Friday, from 3 till 5 p.m. during January, February, and March. During these months the Laboratory is open daily to members of the class from 10 till 5. This Course can only be taken in conjunction with the Lectures on Comparative Pathology.

SYLLABUS.

The Comparative Pathology of Anthrax, Tuberculosis, Glanders, Tetanus, Diphtheria, Actinomycosis, Rabies, and Diseases caused by Animal Parasites.

The Morphology of Microbes and Animal Parasites.

The various methods of artificial cultivation of Micro-organisms. The mode of preparation and method of sterilisation of liquid and solid culture media.

The staining of microbes in fluids and in the tissues.

The Bacteriological examination of Earth, Air, Water, Food, etc.

Modes of infection (natural and artificial) by Pathogenic Micro-organisms, and Animal Parasites.

Special characteristics and properties of the Pathogenic Micro-organisms of Actinomycosis, Anthrax, Blue Pus, Chicken Cholera, Asiatic Cholera, Diphtheria, Erysipelas, Endocarditis, Glanders, Leprosy, Malaria, Malignant Oedema, Osteo-myelitis, Pneumonia, Pyæmia and Septicæmia, Relapsing Fever, Suppuration, Swine Erysipelas, Tetanus, Tuberculosis, Typhoid Fever, etc.

Natural and Acquired Immunity. The preparation of Antitoxic Serums.

Every Student is required to provide himself with a good microscope, which if possible should be fitted with a $\frac{1}{2}$ inch, a $\frac{1}{6}$ inch, and a $\frac{1}{12}$ inch (oil immersion) lens with an Abbe's condenser.

BOOKS RECOMMENDED.—Manual of Bacteriology, Crookshank. Bacteria and Their Products, Sims Woodhead. Practical Bacteriology, Kanthack and Drysdale. Parasites, Cobbold. Parasites of Man, Leuckart.

PRACTICAL PHARMACY.

In the Dispensary of the Royal Infirmary.

BURROUGHS, WELLCOME & CO.
LIBRARY
No.

SUMMER SESSION,

1897.

COMMENCING MAY 3RD, ENDING JULY 30TH.

LECTURES AND LECTURERS.

MEDICAL JURISPRUDENCE.

J. MURPHY, M.A., M.D., Surgeon to the Sunderland Infirmary.

On Tuesday and Thursday, at 4 p.m.

Definition of Medical Jurisprudence.

The legal position of Medical Men.

The Coroner's Court. The Medical Witness.

Suspended Animation. Death. Certificate of Death, when to be refused. Legal presumption of Death. Dying declarations. Wills made at the time of Death. Methods of Dying. Changes in the condition of a Corpse.

Wounds. Legal Definition of. Dangerous to life. Causing grievous bodily harm. Was the Wound received during Life or after Death? Homicide. Suicide. Accident. Did the Injury cause Death, directly or indirectly? Murder. Manslaughter. Particular injury of the Head, Heart, and other Organs. Gunshot Wounds. Railway injuries, Compensation for.

Offences against Chastity. Rape. Pregnancy. Criminal Abortion. Infanticide. Concealment of Birth.

Asphyxia. Drowning. Hanging. Suffocation.

Inheritance. Life Assurance. Lunacy. Legal Responsibility of the Insane. Toxicology.

TEXT BOOK.—Guy and Ferrier's Handbook.

PATHOLOGY.

David Drummond, M.A., M.D., D.C.L., Physician to the Royal Infirmary, Newcastle, assisted by Robert A. Bolam, M.B., B.S.

Monday, Wednesday, and Friday, at 4 p.m.

Two days in each week will be devoted to practical work, the third to a Special Lecture on the subjects relating to the specimens distributed. This Lecture will be illustrated by means of Photomicrographs and by the Projection Microscope. The Electrical Lantern, which is fitted with a 2,000 candle-power arc lamp, is utilised for this purpose.

In the practical work stained sections prepared by the Paraffin, Celloidin, and Freezing Methods will be distributed, and Students must provide themselves with the necessary mounting apparatus and reagents. Each Student must also possess a good microscope with low and high powers.

MATERIA MEDICA AND THERAPEUTICS.

S. McBean, M.A., M.D.

On Monday, Wednesday, and Friday, at 4 p.m.

OPERATIVE SURGERY.

W. C. Arnison, M.D., D.C.L., M.R.C.S., Professor of Surgery in the University, and Senior Surgeon to the Royal Infirmary, Newcastle, and F. Page, M.A., M.D., Surgeon to the Royal Infirmary, Consulting Surgeon to the Fleming Memorial Hospital for Sick Children, and to the Borough Lunatic Asylum, Coxlodge, Newcastle.

Daily at 8·30 a.m., by Professor Arnison.

On Monday, Tuesday, Wednesday, and Thursday at 3 p.m., by Mr. Page.

Every Student attending the Class is called upon to perform Operations on the dead subject in turn, and to answer questions as to the different modes in which each operation may be performed.

Text Books.—Treves' Operative Surgery. Jacobson's Operative Surgery.

PRACTICAL PHYSIOLOGY.

G. E. Williamson, M.A., F.R.C.S., Surgeon to the Royal Infirmary, Newcastle, Thomas Oliver, M.A., M.D., F.R.C.P., Professor of Physiology in the University, and Physician to the Royal Infirmary, Newcastle, and R. A. Bolam, M.B., B.S.

1.—Practical Histology.

Mr. Williamson.

Tuesday at 12, Wednesday and Saturday at 9 a.m.

Each Student is rendered familiar with the fundamental methods of Histology by making for himself preparations of the more common tissues. Stained sections, prepared chiefly by the Paraffin Method, are also distributed, so that at the end of the course the Student will possess a complete set of specimens illustrating the minute anatomy of the tissues and organs of the body. By means of the Electric Lantern and Projection Microscope, the various tissues are systematically demonstrated upon the screen—Lectures being given at intervals for this purpose.

Microscopes.—Every Student must provide himself with a good Microscope.

2.—Practical Chemical Physiology.

Professor Oliver and R. A. Bolam, M.B., B.S.

Tuesday and Thursday at 9 a.m.

Each Student attends in the Laboratory to perform practical work in the following Subjects :—

Chemistry of Carbohydrates, Fats, Proteids, and allied groups.
Chemistry of Foods.—Milk, Bread, etc.
Chemistry of Digestion.—Saliva, Bile, Peptic and Pancreatic Digestion.
Chemistry of Urine.—Normal and Pathological. Quantitative Estimation of Urea, Sugar, etc.
Chemistry of Blood—with Demonstrations on the Estimation of Hæmoglobin, and the Enumeration of Corpuscles.

3.—PRACTICAL PHYSIOLOGICAL PHYSICS.

Professor OLIVER and R. A. BOLAM, M.B., B.S.

Tuesday and Thursday at 9 a.m.

Demonstrations will be given on Physiological Instruments, *e.g.*, Kymograph, Sphygmograph, Cardiograph, Heart Levers. The commonly used Electrical Apparatus, Batteries, Keys, Induction Coil, Galvanometer, Shunts, etc.; Time Markers, Recording Apparatus, Moist Chambers, Myographs. Muscle Nerve Preparations. Ophthalmoscope, Laryngoscope, Frost's Artificial Eye, Kühne's Artificial Eye, etc.

TEXT BOOKS.—Schäfer's Essentials of Histology. Halliburton's Essentials of Chemical Physiology. Harris and Power's Manual for the Physiological Laboratory.

4.—ADVANCED PRACTICAL PHYSIOLOGY.

R. A. BOLAM, M.B., B.S.

This Course is intended for Students who are preparing for the Intermediate Examination in Medicine of the London University, or for the Primary Fellowship Examination of the Royal College of Surgeons. It consists of Laboratory Work in Physiological Physics, Chemical Physiology, and Histological Methods of a more advanced nature.

This Class meets for two hours twice a week during the Winter or the Summer Session. The fee for the Class of Advanced Practical Physiology is three guineas for a three months' Course.

PRACTICAL CHEMISTRY.

Professor BEDSON, M.A., D.Sc., at the Durham College of Science.

Every Monday, Wednesday, and Friday, from 10 a.m. to 1 p.m.

This Course is intended to make the Student familiar with the elements of qualitative analysis; the detection of the commoner bases and acids in simple salts; the reactions of glucose, cane sugar, fats, urea, uric acid, and of the commoner alkaloids.

A portion of the time set apart for this Course is devoted to a series of Lectures on the elements of Organic Chemistry. The Laboratories are open daily from 10 a.m. to 1 p.m., and from 2 p.m. to 5 p.m.

PRACTICAL PHYSICS.

Professor H. Stroud, M.A., D.Sc., at the Durham College of Science.

Wednesday and Friday, from 2 p.m. to 5 p.m., during the Summer Session.

This Course is designed to afford Students the opportunity of becoming familiar with the use of the simpler Physical Instruments. It will include experiments in Experimental Mechanics, Heat, Electricity, and Optics.

SANITARY CHEMISTRY.

Laboratory Course.

(Times to be arranged.)

Professor Bedson, at the Durham College of Science.

Books Recommended.—Parkes' Hygiene. Wilson's Hygiene. Stephenson and Murphy's Treatise on Hygiene and Public Health. Wanklyn's Water Analysis. Noel Hartley's Air, Water, and Disinfectants. Hydrostatics and Pneumatics, Magnus (Longmans). Laws of Health, Corfield (Longmans), and selections from other works.

PSYCHOLOGICAL MEDICINE.

T. W. McDowall, M.D., Medical Superintendent of Northumberland County Asylum, Morpeth.

Every Tuesday in the College of Medicine, Newcastle-on-Tyne, at 2 p.m.

Every Saturday, or other day as may be arranged, at the Asylum, Morpeth, at 2·45 p.m.

The chief object of this Course is to convey Clinical Instruction. Systematic Lectures will be delivered at the College on Tuesdays, at 2 p.m., when the Classification, Causes, Symptons, Treatment, and some of the Medico-legal Relations of Mental Diseases will be considered.

During the Clinical Instruction at the Asylum, Students will have opportunities of examining cases and thus becoming familiar with the various forms of insanity.

Text Books.—Any one of the following: Blandford's Insanity and its Treatment. Savage's Manual on Insanity. Clouston's Clinical Lectures on Mental Diseases.

ANATOMY.

Professor Howden, M.A., M.B., F.R.S.E.

Dissections are carried on in Summer.

A Course of Demonstrations on Anatomy for Senior Students will be given. The days and hours to be arranged at the commencement of the Session.

NATURAL HISTORY.

Professor G. S. Brady, LL.D., M.D., F.R.S.

The Course of Lectures on Natural History delivered in the Durham College of Science qualifies for the primary examination for the Fellowship of the Royal College of Surgeons of England.

ELEMENTARY BIOLOGY.

Professor M. C. Potter, M.A., at the Durham College of Science.

Every Tuesday and Thursday, from 9 a.m. to 12; Saturdays, 10 a.m. to 1 p.m.

The fundamental facts and laws of the Morphology, Histology, Physiology, and Life-histories of Plants as illustrated by, *Bacterium*, *Saccharomyces*, *Hæmatococcus*, *Spirogyra*, *Mucor*, *Fucus*, *Fern*, *Flowering Plant.*

The fundamental facts and laws of Animal Morphology as illustrated by *Amœba*, *Vorticella*, *Hydra*, *Distomum*, *Tænia*, *Lumbricus*, *Astacus*, *Amphioxus*, *Scyllium*, *Rana*, *Lepus.*

A consideration of the general developmental history of *Amphioxus*, *Rana*, *Gallus*, will be given.

Practical instruction in the general structure of each of the animal and vegetable types above specified will be given.

Each Student is required to provide himself with Microscope, Dissecting Instruments, and Razor.

Text Books.—Marshall and Hurst's Practical Zoology. Marshall's Frog. Bower's Practical Botany. Potter's Botany.

CURATOR OF MUSEUM.

Professor Howden, M.A., M.B., F.R.S.E.

TIME TABLES OF LECTURES AND CLASSES.

WINTER, 1896-97.

		M.	Tu.	W.	Th.	F.	S.
*Anatomy Lectures	Senior	—	12	12	12	—	—
	Junior	12	—	—	—	12	—
	Regional	—	—	—	2·15	2·15	—
Anatomical Demonstrations		2·15	2·15	21·5	—	—	—
Physiology "		9·15	—	9·15	—	9·15	—
Chemistry "		11	—	11	—	11	—
Medicine "		5	—	5	—	5	—
Surgery "		6	—	6	—	6	—
Midwifery and Diseases of Women and Children ..		—	3	3	3	—	—
Public Health Lectures ..		†3	4	—	4	—	—
‡Comparative Pathology ..		2	—	2	—	2	—
Physics		—	10	—	—	—	—
Practical Anatomy		9–5	9–5	9–5	9–5	9–5	9–12
Practical Chemistry		9·30–4·30	—	9·30–4·30	—	—	9·30-12·30
‡Practical Bacteriology.. ..		10–5	10–5	10–5	10–5	10–5	10–12

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* After Christmas the Junior Class will meet on Wednesdays at 12 instead of the Senior. † Elementary Bacteriology during October, November, and December. ‡ During January, February, and March.

SUMMER, 1897.

		M.	Tu.	W.	Th.	F.	S.
Medical Jurisprudence ..		—	4	—	4	—	—
Pathology		4	—	4	—	4	—
Elementary Biology		—	9–12	—	9–12	—	10–1
Materia Medica		4	—	4	—	4	—
*Operative Surgery ..		8·30 a.m. 3 p.m.	8·30 a.m. 3 p.m.	8·30 a.m. 3 p.m.	8·30 a.m. 3 p.m.	8 30 a.m. —	8·30 a.m —
Practical Chemistry		10–1	—	10–1	—	10–1	—
Practical Physiology	Histology ..	—	12	9	—	—	9
	Physiological Chemistry & Physics	—	9	—	9	—	—
Psychological Medicine ..		—	2	—	—	—	2·45†
Practical Anatomy		9–5	9–5	9–5	9–5	9–5	9–12
‡Anatomical Demonstrations		—	—	—	—	—	—
Practical Physics		—	—	2–5	—	2–5	—

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* During a limited period of the Session. † In the Wards of the Northumberland County Asylum, Morpeth. ‡ Hours will be fixed at the beginning of the Session.

VISITING DAYS, ETC., AT ROYAL INFIRMARY.

1896-97.

	M.	Tu.	W.	Th.	F.	S.
In-Patient Department.						
Physicians :—						
Dr. Philipson	—	—	10	—	—	10
Dr. Drummond	10	—	—	—	10	—
Dr. Oliver	10	—	—	—	10	—
Dr. Limont	—	—	10	—	—	10
Surgeons :—						
Dr. Arnison	—	—	*10	—	—	10
Dr. Hume	10	—	—	—	10	—
Mr. Page	—	—	10	—	—	10
Mr. Williamson	10	—	—	—	*10	—
Out-Patient Department.						
Physicians :—						
Dr. Philipson	—	—	10	—	—	—
Dr. Drummond	—	—	—	10·30	—	—
Dr. Oliver	—	10·30	—	—	—	—
Dr. Limont	—	—	—	—	—	10
Surgeons :—						
Dr. Arnison	—	9	—	—	—	—
Dr. Hume	—	—	—	—	9	—
Mr. Page	—	—	—	9	—	—
Mr. Williamson	—	—	—	—	—	9
Major Operations	—	9·30	—	—	—	—
Dental Surgeon :— Mr. Markham	—	4	—	—	4	—
Eye Department :— Mr. Williamson	12	—	—	9	—	—
Skin Department :— Dr. Limont	—	—	—	—	10	—
Department for Diseases of Women	—	10	—	—	—	—
Throat & Ear Department :— Mr. Ridley	—	—	—	10	—	—
Casualties and Reception of In and Out Patients :— By House Physicians and House Surgeons	12	12	12	12	12	12

* Operation Days.

HOSPITAL PRACTICE.

Hospital Practice may be attended at the Royal Infirmary, Newcastle, in which the required Medical and Surgical Clinical Lectures are delivered. Clinical Instruction is given in the Wards, and Examinations are held by the Physicians and Surgeons.

Physicians.	*Surgeons.*
Dr. Philipson.	Dr. Arnison.
Dr. Drummond.	Dr. Hume.
Dr. Oliver.	Mr. Page.
Dr. Limont.	Mr. Williamson.

CLINICAL LECTURES.

Lectures on Clinical Medicine are delivered by the Physicians, in rotation, on Wednesdays at 11 o'clock. Notice of the days and hours of the Clinical Instruction in the Wards, is posted in the entrance hall of the Royal Infirmary, at the commencement of the Winter and Summer Sessions.

Lectures on Clinical Surgery are delivered by the Surgeons, in rotation, on Thursdays at 10 o'clock.

Pathological Demonstrations are given at 11·30 a.m., as opportunity offers, by the Pathologist.

Eye Department.—Demonstrations are given to the Students on Mondays at 12 o'clock, and on Thurdays at 9 a.m.

Skin Department.—Demonstrations are given in the out-patient department on Fridays at 10 a.m.

Throat and Ear Department.—Demonstrations are given in the out-patient department on Thursdays at 10 a.m.

Department for Diseases of Women.—Demonstrations in out-patient department by the Physicians on Tuesdays at 10 a.m. Clinical Lectures by the Surgeons once a fortnight and Ward Demonstrations as opportunity offers.

HOSPITAL FOR INFECTIOUS DISEASES.—Notice of the days and hours of Clinical Instruction will be posted in the College of Medicine and in the Royal Infirmary, at the beginning of the Winter Session.

NORTHUMBERLAND COUNTY LUNATIC ASYLUM.—Clinical Instruction is given weekly during the Summer Session.

FEES FOR LECTURES AND HOSPITAL PRACTICE.

1. A Composition Ticket for the complete series of Courses of Lectures at the College* may be obtained :—

(i.) By the payment of 70 guineas on entrance.

(ii.) By two payments, the first of 45 guineas at the commencement of the first year, and 35 guineas at the commencement of the second year.

(iii.) By the payment of three annual instalments, the first of 35 guineas, the second of 30 guineas, and the third of 20 guineas, at the commencement of the Sessional Year.

In the event of it becoming necessary for a Student to take out any extra course, he will be required to pay the special fee for that course.

⁂ The Council wish it to be clearly understood that the payment of the composition fee does not confer the right to attend the College in perpetuity, and that if, after the completion of his curriculum, the further attendance of a Student shall be deemed from any cause undesirable, the Council shall have the right, if they think proper, to debar such Student from further attendance.

Single Courses of Lectures, 5 guineas, except the Courses of Practical Pharmacy and Physics, which are each 2 guineas ; and the Course of Lectures on Sanitary Chemistry and

* By the complete series of Courses of Lectures is understood the series of Courses tabulated on pp. 29 and 30 of this Prospectus.

Physics for the Degree of Bachelor in Hygiene and for the Diploma in Public Health, which is 3 guineas. The Fee for three months' instruction in the Chemical Laboratory is 5 guineas, and for three months' instruction in the Bacteriological Laboratory, 6 guineas. The Fee for Dissections is 3 guineas in Winter, and 2 guineas in the Summer. The Fee for each Course or half Course attended by Candidates rejected at any Degree Examination is 2 guineas.

2. Fees for attendance on Hospital Practice :—

	Guineas.
For three months' Medical and Surgical Practice	5
Six months' Medical and Surgical Practice ...	8
One year's Medical and Surgical Practice in one payment	12
Composition Fee for Medical and Surgical Practice in one payment	25

Or by instalments at the commencement of the Sessional Year, viz. :—First year, 12 guineas; second year, 10 guineas; third year, 6 guineas; or by two instalments, viz. :—First year, 14 guineas; second year, 12 guineas.

In addition to the above fees, the Committee of the Royal Infirmary require the payment of 2 guineas yearly up to three years, from every Student attending the Royal Infirmary for a year or part of a year, which payment has to be made to the House Governor. After three years of attendance, such payment will be no longer necessary.

3. The fee for attendance on the Practice of the Hospital for Infectious Diseases during the Winter is 2 guineas.

The fee for six months' practical study of out-door Sanitary work is 8 guineas.

The fee for a course of instruction in Vaccination is 1 guinea.

A fee of half-a-guinea is charged for each "Part" taken for Dissection, and from every Member of the Class on Operative Surgery.

A fee of 10s. is required for the use of the College Library from Students attending the College for one year only, and a fee of 15s. from those attending for the full period.

One guinea caution money, to be returned at the end of the Session, less the cost of any loss or damage, is required for the use of Apparatus in the Chemical Laboratories, and 10s. caution money for the use of Books.

Every Student is required to join the Athletic Club, which is managed by an Executive Committee elected by the Students, and supported by the Staff of the College, to promote Athletic Pursuits, viz.: Football (Association and Rugby), Cricket, Tennis, Gymnastics, etc.

The Subscription is 1 guinea per annum, payable to the Secretary at the time of Registration.

Fees for Lectures, etc., at the College, must be paid to the Secretary at the College; Fees for Hospital Practice or Clinical Lectures, to the Senior House Physician at the Royal Infirmary; Fees for attendance at the Hospital for Infectious diseases and out-door Sanitary work to Dr. H. E. Armstrong, Health Department, Town Hall; and the fee for course of instruction in Vaccination to Mr. John Hawthorn, M.R.C.S., 21, Nun Street, Newcastle-on-Tyne.

☞ Students must understand that they are expected to attend all the Lectures in each Course in their curriculum, and that except in case of absence due to sickness or other unavoidable cause (to be approved by the Council), such attendance is necessary. Otherwise their Certificates are liable to be withheld.

RULES TO BE OBSERVED BY STUDENTS.

1. All Students, including those attending the Hospital Practice or Clinical Lectures, must enrol their names on the College Register *within a week* from the beginning of each Session. *Students who desire to enter after that time must make special application, and state why they have delayed entering their names.*

2. Students are required to be punctual and orderly in their attendance upon Lectures and Demonstrations, and to observe decorum in the College, Hospital, and elsewhere.

3. Regularity of attendance and orderly conduct at Lectures, Classes, and Class Examinations are necessary to secure Certificates of Attendance.

The following Resolutions have been adopted by the Council, viz. :—

(*a*) That a return be presented at the end of each Winter Session by the Professor of Anatomy, giving the names of those Students who have failed to present themselves for, or who have failed to pass their examinations within reasonable time, together with a report of their general conduct.

(*b*) That if a Student be known to be systematically neglecting his work at the College or Hospital, or fail to present himself for his examination within a reasonable time of the period at which in ordinary course he might have presented himself, a report of the fact be sent by the Council, to his parents or guardians, or to the person to whom the Student may be responsible for his conduct. Failure to comply with this notice from the Council renders a Student liable to suspension.

4. Certificates and Prizes will only be granted when the work and conduct of the Student are satisfactory to the Council, and in all cases a Certificate or Prize may be refused on the ground that a Student has not conducted himself properly.

5. Students are required to make good, to the satisfaction of the Council, any damage or injury they may cause to the property of the College.

6. No specimens or preparations may be removed from the Museum, nor may any Books, or unbound Medical Journals, lying on the tables of the Library be removed from the room.

7. Students are required to wear Academical Dress at Lectures, and at Class and Degree Examinations.

8. The infringement of the above, or any other rules, which may from time to time be passed by the Council, renders a Student liable to suspension or immediate dismissal from the College, and to the forfeiture of all fees, certificates, and privileges as a Student of the College.

9. No fee will be returned for any portion of the curriculum that a Student may have forfeited by irregularity or misconduct.

10. Smoking is strictly prohibited inside the College buildings, except in the room provided for that purpose.

11. Every Student is required, on entering the College, to sign the following form :—

> I, the undersigned, being a Student of the University of Durham College of Medicine, Newcastle-upon-Tyne, hereby undertake to comply with all Rules and Regulations of the College, and to conduct myself on all occasions in an orderly manner. I fully understand that I have no claim upon the Council of the College in respect of any Fees paid by or due from me in case such Fees are forfeited by any irregularity or misconduct on my part.

The Professor of Anatomy is specially empowered to see that the above rules of the College are observed, and carried out by the Students.

BURROUGHS, WELLCOME & Co.
LIBRARY
No.

SCHOLARS AND PRIZEMEN.

University Scholars.

1856—William C. Arnison
1857—Evan Thompson
1858—John Hope
1859—W. R. Coward
1860—A. O. Haslewood
1861—G. C. Gilchrist
1862—F. W. Newcombe
1863—W. J. Davidson
1864—F. S. Higgs
1865—No Candidate
1866—Dudley Eglington
Charles Gibson
1867—R. W. Young
1868—Michael Hodgson
1869—John Murray
1870—Thomas Lindsay
1871—John B. Emmerson
1872—Motherwell Duggan
1873—Chas. Riddell Bell
1874—Chas. M. Goyder
1875—J. R. Dodd
1876—W. Robinson
1877—A. J. Beanlands
1878—C. S. Blair
1879—J. S. Reveley
1880—J. M. Robson
1881—A. Green
1882—L. L. Bailes, B.A.
1883—L. A. Baine
1884—A. E. Cope
1885—F. Bulman, B.A.
1886—R. H. Shaw
1887—G. Foggin, B.A.
1888—W. E. Peacock
1889—Jno. Braithwaite
1890—R. A. Morris
1891—G. W. Harbottle
1892—M. A. Archdall
1893—H. A. Fielden
1894—H. B. Fawcus
1895—F. W. Lambelle

Dickinson Scholars.

1868—James Douglas Murray
1869—George Rowell
1870—John Teasdale Clarke
1871—W. T. Kaye
1872—Auburn Wilkinson
1873—W. T. Wilson, M.A.
1874—No Award
1875—George Newton
1876—M. Duggan
1877—M. Malvin
1878—C. M. Goyder
1879—Jno. R. Dodd
1880—W. G. Black
1881—W. Robinson
1882—S. Brookfield
1883—No Award
1884—No Award
1885—F. Proud
1886—B. G. Sumpter
1887—No Award
1888—H. J. Parry
1889—R. H. Shaw
1890—No Award
1891—No Award
1892—W. H. Bishop
1893—R. A. Morris
1894—E. R. Kendall
1895—J. R. Adamson

Tulloch Scholars.

1877—J. R. Dodd
1878—No Award
1879—W. Robinson
C. H. C. Milburn
1880—Samuel Brookfield
1881—I. Hartley
1882—J. S. Reveley
1883—F. Proud
1884—A. F. Bradbury
1885—L. A. Baine
1886—A. E. Cope
1887—F. Bulman, B.A.
1888—No Award
1889—No Award
1890—J. P. Willis
1891—C. G. B. Kempe
1892—Thos. Horton
1893—Jno. R. Adamson
1894—A. G. W. Pearson
1895—Henry Coxon Coxon
1896—Edward Gofton

Charlton Scholars.

1877—Mark Malvin
1878—C. M. Goyder
1879—Hugh T. Bowman
1880—W. G. Black
1881—W. Robinson
1882—S. Brookfield
1883—H. M. Fenwick
1884—J. M. Lazenby
1885—H. T. Platt
1886—B. G. Sumpter
1887—J. W. Lecch
1888—H. J. Parry
*1889—R. H. Shaw
1890—Henry Smith
1891—W. J. Durant
1892—J. P. Willis
1893—A. E. Thompson
1894—T. C. Barkas
1895—E. R. Kendall
1896—C. Salkeld, B.A.

Gibb Scholars.

1879—J. Foggin
1880—W. G. Black
1881—W. Robinson
1882—A. Dodd
1883—J. M. Lazenby
1884—Fredk. Proud
1885—A. Green
1886—M. M. Bowlan
1887—H. J. Parry
1888—A. E. Cope
1889—R. F. Craggs
1890—Alf. Cox
1891—Benjamin May
1892—H. E. Gamlen
W. E. Peacock
1893—R. A. Morris
1894—E. R. Kendall
W. E. Alderson
1895—F. S. Walker

Goyder Scholars.

1885—No Scholarship awarded
1886—W. Baigent
1887—No Award
1888—H. J. Parry
1889—R. H. Shaw
1890—Thos. Beattic
1891—Wm. Jas. Durant
1892—J. P. Willis
1893—B. H. Morris
1894—T. C. Barkas
1895—E. R. Kendall
1896—Norman McCall-Smith

---

* Mr. C. A. Dalgleish obtained the highest number of marks, but was ineligible for the scholarship, being a Fifth Year's Student.

Luke Armstrong Scholars.

1889—Albert Ernest Cope, M.B., B.S.
1890—Thos. Beattie, M.B., B.S.
1891—Edward Cecil Willcox, M.B., B.S.
1892—Wm. Harvey Maidlow, M.B., B.S., M.R.C.S., L.R.C.P.
1893—Bedlington Howell Morris, M.B., B.S.
1894—Thomas Horton, M.B., B.S.
1895—Chas. Allan La Touche Brough, M.B., B.S., L.R.C.P.

Stephen Scott Scholars.

1893—No Award
1894—No Award
1895—C. G. B. Kempe, M.B., B.S.

Heath Scholar.

1896—George Palmerston Newbolt, M.B., F.R.C.S.

Assistant Demonstrators of Anatomy.

1880-81
- B. W. Walker, L.R.C.P., M.R.C.S.
- C. Vise, M.R.C.S.
- D. H. Barley
- H. M. Fenwick (retired ill)
- G. W. Ridley, app. Jan., 1881

1881-82
- S. T. Pruen
- James Watson
- F. E. Abbot
- I. Hartley (retired)
- G. G. Howitt, app. Jan., 1882

1882-83
- Simpson Powell, M.R.C.S.
- Cornelius C. Caleb
- F. A. Saw
- G. P. Newbolt

1883-84
- T. Carr, M.R.C.S.
- C. E. Jennings, F.R.C.S., L.R.C.P.
- A. C. Dove
- A. J. H. Montague

1884-85
- F. Bass, F.R.C.S.
- P. Boobbyer, M.R.C.S.
- R. Heelis, M.R.C.S.
- W. Racc
- A. B. Blacker, M.R.C.S.

1885-86
- G. A. E. Murray, L.R.C.P., M.R.C.S.
- C. U. Laws, M.R.C.S.

1886-87
- T. Wholey, L.R.C.P., M.R.C.S.
- A. M. Jones, M.R.C.S., L.S.A.

1887-88
- R. C. Benington, L.R.C.P., M.R.C.S.
- W. H. Coates, F.C.S.
- H. B. Angus

1888-89
- James Scott Tew, M.R.C.S., L.S.A.
- Avery Clough Waters, M.R.C.S., L.S.A.

1889-90
- C. W. Turner, M.R.C.S.
- J. A. Hutton, M.R.C.S., L.R.C.P.
- T. M. Allison
- R. H. Cole

1890-91
- J. P. Willis
- Benj. May
- W. E. Peacock
- A. E. Mercwether

1891-92
- C. H. Bryant
- A. Y. Richardson
- C. G. B. Kempe
- J. T. M. Whitling

1892–93
W. E. Alderson
W. E. Rielly
G. E. Pearcey
P. Davidson

1893–94
H. L. Hatch, M.R.C.S., L.R.C.P.
H. D. Senior, M.R.C.S., L.R.C.P.
H. Robinson, M.R.C.S., L.R.C.P.

1894–95
James Coltman
Percy Holgate
Charles Salkeld, B.A.
T. O. Scott, M.A.

1895–96
H. C. Coxon
J. M. Gover
W. B. Milbanke
G. G. Turner

Assistant Curators of Museum.

1878–79—H. T. Bowman
1879–80—R. P. Stubbs
1880–81—W. Robinson
1881–82
J. Waldy (retired)
S. Broookfield (App. Oct. 1881)
1882–83
A. Dodd (retired)
A. Bourne
1883–84
J. M. Lazenby
B. C. Simpson
1884–85—A. F. Bradbury (6 mos.)
1885—J. Stokes (6 mos.)
1886—G. W. Davis, L.R.C.P., M.R.C.S.
1887—C. R. Adams

Assistant Demonstrators of Physiology.

1879
C. H. C. Milburn
W. Turnbull
1880
R. Hardie
D. H. Barley
H. M. Fenwick
1881
G. W. Ridley
F. L. Carter
1882—F. L. Carter
1883—J. Lazenby
1884
B. C. Simpson
W. Race
1885
W. Race
W. H. G. Williams
1886
W. H. G. Williams
H. J. Parry
1887
H. J. Parry
A. E. Cope
A. P. Arnold
1888
A. P. Arnold
F. Bulman, B.A.
1889
C. W. Turner, M.R.C.S.
A. Cox
1890
Jno. Braithwaite
W. E. Peacock
1891
Jno. Braithwaite
J. W. H. Eyre
R. A. Bolam
C. H. Bryant
1892
T. C. Barkas
Thos. Horton
Geo. E. Pearcey
1893
A. H. Hobbs
E. Tonge
T. H. Urwin
J. S. Manford
1894
C. Salkeld, B.A.
T. O. Scott, M.A.
E. W. Gilroy
A. G. W. Pearson
J. Coltman
1895
H. C. Coxon
L. S. Davison
J. M. Gover
C. Johnson
1896
E. Gofton
L. F. Hemmans
J. T. Johnson
Jas. Milligan
Jas. Muirhead

Assistant Demonstrators of Pathology.

1887	H. J. Parry
1888	S. Bodger
1889	R. F. Craggs
1890	C. W. Turner, M.R.C.S.
	W. H. Turnbull
1891	W. E. Peacock
	Benj. May
1892	Benj. May
	R. A Bolam
	G. H. V. Appleby
	H. E. Gamlen
1893	R. A. Bolam
	A. Y. Richardson
1894	J. S. Manford
	E. R. Kendall
	Wm. Simpson
	G. W. Scott
1895	E. W. Gilroy
	C. Salkeld, B.A.
	T. O. Scott, M.A.
1896	H. C. Coxon
	E. W. Gilroy
	Charles Johnson
	C. Salkeld, B.A.
	T. O. Scott, M.A.

CLASS PRIZES.

SUMMER SESSION, 1895.

Practical Chemistry—

Prize and 1st Class Honour Certificate—Norman C. Bailes

1st	Class Honour	Certificate—	James Muirhead
1st	,,	,,	J. W. H. Morrison
1st	,,	,,	Charles T. Holmes
2nd	,,	,,	S. J. S. Cooke
2nd	,,	,,	R. Harry Vincent
3rd	,,	,,	Carl Lotinga

Practical Physics—

Prize and 1st Class Honour Certificate—Edward Gofton

2nd	Class Honour	Certificate—	G. O. M. Dickenson
2nd	,,	,,	Fred. Stuart
2nd	,,	,,	John T. Johnson
3rd	,,	,,	John Macfadyen
3rd	,,	,,	R. H. Dix
3rd	,,	,,	Norcliffe Roberts
3rd	,,	,,	Harold B. Fawcus
3rd	,,	,,	J. W. H. Morrison
3rd	,,	,,	James Muirhead

Biology—
Prize and 1st Class Honour Certificate—Norman C. Bailes

1st Class Honour Certificate—James Muirhead
2nd ,, ,, James Milligan
3rd ,, ,, E. T. Born

Materia Medica—
Prize and 1st Class Honour Certificate—Henry C. Coxon

2nd Class Honour Certificate—W. B. Milbanke
3rd ,, ,, G. G. Turner

Pathology—
Prize and 1st Class Honour Certificate—Charles Salkeld

Practical Physiology—*Senior*—
Prize and 1st Class Honour Certificate—Henry C. Coxon

1st Class Honour Certificate—G. G. Turner
2nd ,, ,, W. B. Milbanke
3rd ,, ,, L. S. Davison

Junior—
Prize and 1st Class Honour Certificate—Edward Gofton

2nd Class Honour Certificate—James Muirhead

Operative Surgery—
Prize and 1st Class Honour Certificate—Percy Holgate

1st Class Honour Certificate—John R. Adamson
1st ,, ,, A. G. W. Pearson

Medical Jurisprudence—
Prize and 1st Class Honour Certificate—Geo. Hedley Tomlinson

1st Class Honour Certificate—Ernest Wm. Gilroy
3rd ,, ,, John David Dodds

WINTER SESSION, 1895-96.

Principles and Practice of Medicine—
Prize and 1st Class Honour Certificate—Charles Salkeld, B.A.

1st Class Honour Certificate—Charles Harold Clarke
2nd ,, ,, W. L. W. Walker

Principles and Practice of Surgery—
3rd Class Honour Certificate—A. G. W. Pearson

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN—
Prize and 1st Class Honour Certificate—B. C. Stevens

PUBLIC HEALTH—
No award.

ANATOMY—*Senior*—
Prize and 1st Class Honour Certificate—Edward Gofton

2nd Class Honour Certificate—N. C. Bailes
2nd ,, ,, J. W. H. Boyd

ANATOMY—*Junior*—
Prize and 1st Class Honour Certificate—R. Alderson

1st Class Honour Certificate—R. H. Dix
3rd ,, ,, D. M. Johnson

REGIONAL ANATOMY—
3rd Class Honour Certificate—Percy Holgate

PHYSIOLOGY—
Prize and 1st Class Honour Certificate—N. C. Bailes

1st Class Honour Certificate—James Muirhead

DISSECTIONS—*Senior*—
Prize and 1st Class Honour Certificate—Edward Gofton

1st Class Honour Certificate—James Muirhead
1st ,, ,, J. T. Johnson

DISSECTIONS—*Junior*—
Prize and 1st Class Honour Certificate—Reginald Alderson

3rd Class Honour Certificate—E. J. L. Kendle

CHEMISTRY—
Prize and 1st Class Honour Certificate—James Robert Burn

1st Class Honour Certificate—T. S. P. Parkinson
2nd ,, ,, R. Alderson

PHYSICS—
Prize and 1st Class Honour Certificate—Richard Henry Dix

1st Class Honour Certificate—Fred. Stuart
1st ,, ,, R. Alderson
2nd ,, ,, James Robert Burn
3rd ,, ,, T. S. P. Parkinson
3rd ,, ,, Frederic Lambelle

LIST OF STUDENTS.

SESSION 1895-96.

Adams, Thomas George Drabble
Adamson, John Robert
Addenbrooke, Bertram
Alderson, Reginald
Aldridge, Arthur William
Anderson, James§
Angus, Henry Brunton*†‡
Appleby, Ernest Bertram
Archdall, Mervyn Alexander
Armstrong, Harry
Arnold, Edwin Gilbert Emerson*‡
Arnold, Walter Osborne
Arnott, Grant
Arthur, Arthur Samuel
Askew, John Robert
Ayre-Smith, Alan
Bailes, Norman Christian
Baker, Alexander
Baker, Arthur Russell
Baker, Joseph Ellis
Baty, William John
Bell, John Thomson
Blandford, Laurence James
Bolton, Andrew Adams
Born, Edward Turner
Boyd, James William Hugh
Bramley, Ernest
Brookes, Clifford Harold
Brown, George Burrows
Brown, Robert Story
Brown, William Cowan
Brown, William Henry
Bunting, Arthur Hugh
Burke, William
Burn, Frank Wilfred
Burn, James Robert
Burrow, Vincent*‡
Cann, Thomas Ponsford
Carter, Ernest
Clarke, Charles Harold
Clarkson, Frederick
Clayton, Arthur Edward
Cochrane, Samuel Thomas
Codrington, William James*‡
Colquhoun, James Smith
Cooke, Frank Anthony
Cooke, Sydney John Snow
Cooper, Joseph Edwin
Coxon, Henry Coxon
Crichton, Harry
Cross, Solomon
Davidson, Leslie
Davies, Frank Aaron
Davison, Henry Edward
Davison, Leopold Stanley
Davson, Wilfrid Maynard
De Lacey, Robert Charles
Dickenson, George Oswald Morrell
Dingle, Charles Vincent†
Dix, Richard Henry
Dodds, John David
Egglestone, Henry
Farrage, James
Fawcus, Harold Ben
Fell, William George
Ferens, Harold
Fielden, Henry Adamson
Frazer-Hurst, Joseph Livingstone
French, Joseph James
Garbutt, Richard Henderson
Gibbs, Thomas Harold
Giblin, Wilfrid Wanostrocht
Gibson, Charles Henry
Gibson, James William
Gilroy, Ernest William
Gisburn, Alfred Ernest

* M.R.C.S. † M.B., B.S. ‡ L.R.C.P. § M.B., C.M

Gofton, Edward
Gourley, Harry Harte
Gover, John Maxwell
Grant, John William Geary*‡
Green, Bernard Charles*
Hall, William
Halliday, John Rutherford
Harbottle, George William
Hardwicke, William Purton Allen
Harker, William Edmund||
Harkness, William Thomas
Harris, John, B.A.
Harrison, William John
Hartigan, James Andrew
Hatch, Herbert Lincoln*‡
Hemmans, Lawrence Fielder
Hethcote, Douglas
Hill, Kennedy Campbell
Hines, Arthur
Hodge, Albert Ernest
Holgate, Percy
Holmes, Charles Thomas
Hope, Albert Adam
Horan, Hubert Wolstenholme
Ingram, Peter Robert§
Inman, Ernest
Jacobs, Maurice
Johnson, Charles
Johnson, John Tyrer
Johnson, Samuel Percy
Johnston, Duncan Matheson
Kendal, Hugh Robert
Kendle, Ernest John Lambert, B.A.
Kennard, Howard Percy
King, James William
Lambelle, Frederic William
Laughton-Smith, Frank*‡
Lindsay, Beatrice
Lister, Walter Herbert
Lloyd, Alfred Phillips
Lotinga, Carl
Lowry, John
Macfadyen, John
Manford, John Stanley
Mankar, Babaji Sarvottam
Markham, Henry Herbert
Martin, John Henry
Mather, Richard Oswald
McBean, Malcolm Gordon
McCall-Smith, Norman
McConnell, James
McKechnie, Montague Vaughan
McLean, Ernest Augustus
Middlemiss, George Whitson
Milbanke, William Byron
Milligan, James
Mitchell, John Robert
Morland, Robert Atkinson
Morrison, John Wilson Howard
Moxon, Harold Richard
Muirhead, James
Newman, Herbert Robert Cambridge
Newsome, Herbert
Newton, Harold Turner
Ney, Archibald C.
Norman, George*‡
O'Neil, Francis
Owthwaite, William
Parkinson, Thomas Smirk Percival
Passmore, Arthur Bradshaw
Patterson, Daniel Wells
Pearson, Albert Garthorne Widdowfield
Peart, Robert
Pendred, Vaughan*‡
Pennefather, Claud Maxwell
Peverley, Walter Augustus
Phillips, Theodore John
Picton, Guy Brougham
Ramsay, John Connel¶
Ramsbottom, Frederick Charles
Raw, Stanley
Reed, Nevin
Renton, Ralph Stuart
Richards, Lewis William*‡
Ritchie, John Melville
Roberts, Norcliffe
Robson, William Greenwell

* M.R.C.S. ‡ L.R.C.P. § M.B., C.M. || M.D., B.S.
¶ L.R.C.P. Ed.

Routledge, Robert Lowis
Rowell, William Henry
Ruffmann, Hermann Heinrich
Russell, Nicholas Fletcher
Russell, Thomas
Salkeld, Charles, B.A.
Scott, John
Scott, Thomas Ovens, M.A.
Shepard, Arthur James
Sidgwick, John Ernest
Simpson, William
Smith, Charles Seaver
Spensley, James Richardson*‡
Squire, Maurice Frederick*‡
Stainthorpe, William Waters
Stevens, Bertram Crossfield
Stewart, Charles
Stonehouse, Gordon
Streatfeild, Thomas*‡
Stuart, Fred.
Sumpter, Eustace Wyatt
Sutton, Fred.
Swainston, Eliot
Swindale, John Aston
Taylor, Evelyn Edmund Percy
Thomson, Sholto Douglas
Thompson, George Sheraton
Thompson, Henry Bates
Threlfall, Edward Norman
Tickner, Leonard King
Tomlinson, George Hedley*‡
Trotter, Alexander Lewis
Turner, George Grey
Van Gelderen, John Adolph
Varey, Maynard
Vaux, Ralph Thomas
Velenski, John Charles
Vincent, R. Harry
Vogwell, Charles Augustus
Von Bergen, Carl Wahlgren
Walker, Allan Mackie Garnock
Walker, Frederick Septimus
Walker, William Longstaffe Wight
Warner, Allan
Warwick, William Henry
Watson, Thomas Blandford
Weir, David Henderson
Whitehouse, William Henry
Widdas, Hugh
Wigfield, Frederick Percy
Wilson, Frederick George
Wilson, Samuel Wesley**
Wilthew, Thomas Nicholson
Wood, Maurice Dale
Woodman, Thomas
Wreford, John*‡

* M.R.C.S. ‡ L.R.C.P. ** L.R.C.P. and S.I.

BURROUGHS, WELLCOME & Co.
LIBRARY
No.

UNIVERSITY OF DURHAM
FACULTY OF MEDICINE.

REGULATIONS FOR DEGREES IN MEDICINE, SURGERY AND HYGIENE, AND DIPLOMA IN PUBLIC HEALTH.

THESE DEGREES ARE OPEN BOTH TO MEN AND WOMEN.

1. For the Degree of BACHELOR IN MEDICINE (M.B.), every Candidate must be not less than 21 years of age, and must produce Certificates of age, of Registration as a Student in Medicine in the books of the General Medical Council, of good moral conduct, and of attendance on such Lectures and Hospital Practice as the Warden and Senate require.

In addition to the Certificate of Registration, the Candidate must produce a Certificate of having passed the Preliminary Examination in Arts for the Degrees in

Medicine of the University of Durham, or a certificate of having passed the first public examination for the Degree of B.Litt. of the University of Durham, unless he shall have, previously to passing the Final Professional Examination, graduated in Arts at one of the following Universities :—Oxford, Cambridge, Durham, London, Victoria (Manchester), Edinburgh, Aberdeen, Glasgow, St. Andrews, Dublin, Queen's University, Royal (Ireland), Calcutta, Madras, Bombay, McGill College (Montreal), Sydney, and Melbourne.

The Preliminary Examination in Arts of the University of Durham is held twice yearly, in March and September. The next examination will be commenced on Tuesday, September 22nd, 1896. The subjects will be as follows :—

Any four of the following subjects, of which two at least shall be languages.

1. Greek. Xenophon, Anabasis, Book i.*
2. Latin. Cicero, De Amicitia.*
3. French. Louis XIV., ch. i.–xiii.*
4. German. Immerman, Der Oberhof.*
5. Mechanics, Hydrostatics, and Pneumatics.
6. Euclid, Books iv. and vi.
7. English History.—William III.—George II.
8. Geometrical Optics.
9. Logic.

The Examinations in 1897 will commence on Tuesday, March 16th and on Tuesday, September 14th. An examination will also be held in January, 1897 (date to be fixed). The subjects will be as follows, viz. :—

Any four of the following subjects, of which two at least shall be languages.

1. Greek. Xenophon, Anabasis, Book ii.
2. Latin. Cicero, De Senectute.*
3. French. Voltaire, Louis XIV., ch. i.–xiii.*
4. German. Goethe, Knabenjahre.*
5. Mechanics, Hydrostatics, and Pneumatics.
6. Euclid. Books iv. and vi.
7. English History. George III. to the end of William IV.
8. Geometrical Optics.
9. Logic.

* Pitt Press Series Edition recommended.

These examinations are held in the University Lecture Rooms, Palace Green, Durham. A time table stating the order of the papers will be posted in the College of Medicine ten days before each examination.

Application for admission must be made at least one month before the Examination. The Fee is £1, payable to the Rev. J. R. Shortt, M.A., Secretary of Examinations, The University, Durham.

For the curriculum required see pages 29 and 30. It is necessary that one of the five years of Professional Education should be spent in attendance at the College of Medicine, Newcastle-upon-Tyne. During the year so spent, the Candidate must attend at least two Courses of Lectures in the Winter Session, and two in the Summer Session, together *with the Class and Test Examinations* held in connection with those Classes, and must also attend Medical and Surgical Hospital Practice and Clinical Lectures on Medicine and Surgery at the Infirmary. Candidates may fulfil this portion of the curriculum at any time before they present themselves for the Final Examination for the Degree. They are not required to reside at Durham. They may spend the other four years of the curriculum either at Newcastle-upon-Tyne, or at one or more of the Schools recognised by the Licensing Bodies named in Schedule (A) of the Medical Act, 1858.

The Lectures on Sanitary Chemistry and Physics and the Course on Practical Chemistry forming part of the curriculum for the Degree of Bachelor in Hygiene and for the Diploma in Public Health cannot be attended as Courses in the curriculum for the Degree of Bachelor in Medicine.

Candidates from Indian Universities must have passed a Matriculation Examination at one of the Indian Universities, and will have to spend one Academic year at the University of Durham College of Medicine, at Newcastle-upon-Tyne, before presenting themselves for the M.B. Degrec Examination, in accordance with the regulation on page 63 of the Calendar. If the Matriculation Examination at the Indian University did not embrace Latin, and Persian or Sanskrit, then it will be necessary for the Candidate, in addition, to produce evidence that he has passed in Latin, and one of these subjects, or in Greek, within *twelve months* of his presenting himself for the Examination for the Degree in Medicine.

EXAMINATIONS.

For Candidates registered *before* January 1st, 1892 (*four years' curriculum*), there are *three* professional examinations, each being held twice yearly, viz.: in April and September.

The subjects for the First Examination are :—Elementary Anatomy ; Elementary Physiology ; Botany, with Medical Botany ; Chemistry with Chemical Physics.

The subjects for the Second Examination are :—Anatomy ; Physiology ; Materia Medica, Therapeutics, Pharmacology, and Pharmacy.

The subjects for the Final Examination are :—Medicine ; Surgery ; Midwifery and Diseases of Women and Children ; Pathology ; Medical Jurisprudence ; Public Health.

For Synopses of the subjects, see page 91.

DATES OF EXAMINATIONS.

First Examination, September 7th, 1896 ; April 5th, 1897 ; September 6th, 1897.

Second Examination, September 14th, 1896 ; April 12th, 1897 ; September 13th, 1897.

Third (Final) Examination, September 21st, 1896 ; April 19th, 1897 ; September 20th, 1897.

For Candidates registered *after* January 1st, 1892 (*five years' curriculum*), there are *four* professional examinations, each being held twice yearly, viz.: in April and September.

The subjects for the First Examination are :—Elementary Anatomy ; Elementary Biology ; Chemistry ; Physics.

The subjects for the Second Examination are :—Anatomy ; Physiology ; Materia Medica, Therapeutics, Pharmacology, and Pharmacy.

The subjects for the Third Examination are :—Pathology ; Medical Jurisprudence ; Public Health.

The subjects for the Fourth (Final) Examination are :—Medicine, Clinical Medicine and Psychological Medicine ; Surgery and Clinical Surgery ; Midwifery and Diseases of Women and Children.

DATES OF EXAMINATIONS :—

First Examination, September 7th, 1896 ; April 5th, 1897 ; September 6th, 1897.

Second Examination, September 14th, 1896 ; April 12th, 1897 ; September 13th, 1897.

Third Examination, September 21st, 1896 ; April 19th, 1897 ; September, 20th, 1897.

Fourth (Final) Examination, April 19th, 1897 ; and September 20th, 1897.

The successful Candidates for the First, Second, Third, and Fourth Examinations for the Degree of Bachelor in Medicine will be arranged in three Classes—in the First and Second (Honours), according to merit, and in the Third (or Pass) in alphabetical order.

Only those Candidates entering for all subjects are eligible to compete for Honours at the First Examination.

Candidates who have completed part of their curriculum elsewhere, may pass their First, Second, and Third Examinations, previous to commencing their year of residence, at Newcastle-upon-Tyne.

Candidates will be admitted to each of these examinations after duly certified attendance at a recognised Medical School on Courses of Instruction in the various subjects of the Examination, as set forth in the Schedules of Certificates issued by the University. These may be obtained on application to the Secretary of the University of Durham College of Medicine, Newcastle-upon-Tyne.

Each Examination must be passed before the next can be proceeded with, and each must be passed in its entirety.

* A Candidate who has passed the First Examination of the Conjoint Board in England of the Royal College of Physicians of London and the Royal College of Surgeons of England, will be exempt from the First Examination of the University of Durham except in the subjects of Elementary Anatomy, Chemistry, and Physics.

A Candidate who has passed the First and Second Examinations of the University will be exempt from the First and Second Examinations of the Conjoint Board in England, and will be entitled to present himself for the Final Examination of the Board on the completion of the necessary curriculum.

* Candidates who hold a Qualification from a recognised Licensing Board in the United Kingdom at the date of entry for the First Examination for the Degrees in Medicine, are in every case required to pass in Chemistry and Physics ; but they are exempt from Examination in Elementary Anatomy and Biology. All Candidates for the First Examination for the Degrees in Medicine, whether exempt from a portion of it or not, are required to pay the full fee—five pounds.

All Candidates whether qualified or unqualified, who entered at the University of Durham College of Medicine on or after May 1st, 1885, come under the Regulations hereinbefore enumerated as in force for the Degrees in Medicine of the University of Durham.

2. For the Degree of DOCTOR IN MEDICINE (M.D.) Candidates must be not less than 24 years of age, and must satisfy the University as to their knowledge of Greek. In case they shall not have passed in this subject at the Preliminary Examination in Arts for the M.B. Degree, they must present themselves at Durham for examination in it, at one of the Ordinary Examinations held for this purpose, before they can proceed to the higher degree of M.D. They

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* These regulations will not apply to Candidates registering as Medical Students on or after October 1st, 1896. Such Candidates must pass in *all* the subjects of the First Examination of the University of Durham.

must also have obtained the Degree of Bachelor in Medicine of the University of Durham, and must have been engaged for at least two years subsequent to the date of acquirement of the Degree of Bachelor in Medicine in attendance on the Practice of a recognised Hospital, or in the Military or Naval Services, or in Medical and Surgical Practice.

Each Candidate must write an Essay, based on original research or observation, on some medical subject selected by himself, and approved of by the Professor of Medicine, and must pass an Examination thereon, and must be prepared to answer questions on the other subjects of his curriculum so far as they are related to the subject of the Essay.

A Gold Medal will be awarded every academical year to the candidate who presents the best Essay, provided that the Essay is judged to be of sufficient merit.

The successful Candidate will be permitted to publish his Essay.

Candidates must use for their Essays, ruled blue laid foolscap paper (16 lbs. per ream weight), with a margin on the left hand side one inch and a half in breadth, and must write on one side of the paper only. The Essay should not exceed thirty pages in length.

The Essays must be forwarded to the Professor of Medicine one month before the date of Examination, and will be retained by the Faculty of Medicine.

If the Essay of any Candidate is not of sufficient merit, notice of the fact will be sent to the Candidate, who will not be required to attend for Examination.

Arrangements have been made by which Bachelors in Medicine resident abroad, and wishing to proceed to the M.D. Degree may do so under special regulations, and may have the degree conferred on them *in absentia*. Particulars of these regulations may be had on application to the Secretary, College of Medicine, Newcastle-upon-Tyne.

3. For the Degree of BACHELOR IN SURGERY (B.S.) every Candidate must have passed the Examination for the Degree

of Bachelor in Medicine of the University of Durham, and must have attended one Course of Lectures on Operative Surgery, and one Course on Regional Anatomy.

Candidates will be required to perform operations on the dead body, and to give proof of practical knowledge of the use of surgical instruments and appliances.

4. For the Degree of MASTER IN SURGERY (M.S.) Candidates must not be less than 24 years of age, and must satisfy the University as to their knowledge of Greek. In case they shall not have passed in this subject at the Preliminary Examination in Arts for the M.B. Degree, they must present themselves at Durham for examination in it, at one of the Ordinary Examinations held for this purpose, before they can proceed to the higher Degree of M.S. They must also have obtained the Degree of Bachelor in Surgery of the University of Durham, and must have been engaged for at least two years subsequent to the date of acquirement of the Degree of Bachelor in Surgery in attendance on the practice of a recognised Hospital, or in the Naval or Military Services, or in Medical or Surgical Practice.

The Subjects of Examination are :—Principles and Practice of Surgery ; Surgical Pathology ; Surgical Anatomy ; Surgical Operations ; Clinical Surgery.

The Examinations for the Degrees of DOCTOR IN MEDICINE and BACHELOR and MASTER IN SURGERY take place at the same time as the Final Examination for the Degree of Bachelor in Medicine.

The Examinations for the Degrees above-named, and for Degrees in Hygiene and the Diploma in Public Health, are conducted at the College of Medicine, Northumberland Road, and in the Royal Infirmary at Newcastle-upon-Tyne, and City Hospital for Infectious Diseases. Candidates are examined (1) by printed papers of questions, (2) practically, and (3) *vivâ voce*.

Every Candidate who intends to present himself for any of the above-named Professional Examinations must give at *least* 28 *days' notice** to the Secretary of the College, and must, at the same time, send the fee and the necessary certificates. If after payment of the fee, a Candidate withdraws his name, or fails to present himself at the Examination, or fails to pass it, he will not receive back the fee, but will be allowed to enter for one subsequent Examination of the same kind without the payment of any additional fee.

In the event of failure at any Examination (except in the case of the Examinations for the Degrees of Doctor in Medicine, Master in Surgery, Bachelor in Hygiene, Doctor in Hygiene, and for the Diploma in Public Health) the Candidate failing will be required to attend a Course of Instruction at a recognised Medical School in the subject or subjects in which he has failed before he can again present himself for Examination.

In the case of Students of this University who fail to pass the First Examination for the Degree of Bachelor in Medicine at the end of their First Year of Study, no fee will be required for this extra Course. This Regulation applies to all Students, whether they have paid the Composition Fee or otherwise, who entered for the First Examination for the Degrees at or subsequently to the Examination held in September, 1887.

Blank forms of Certificates to be filled in for attendance on these extra Courses may be obtained from the Secretary, College of Medicine, Newcastle-upon-Tyne, to whom they must be re-forwarded, properly filled in, at least 28 days before the date of re-Examination.

Candidates referred at the Final Examination for the Degrees are required to show evidence of having attended at least half a full Course in the subject or subjects in which they have been referred.

At the University of Durham College of Medicine the fee to be paid for each extra Course or half Course, attended by a referred Candidate, is 2 guineas.

* This rule will be strictly enforced.

THE DEGREE OF DOCTOR IN MEDICINE, FOR MEDICAL PRACTITIONERS OF FIFTEEN YEARS' STANDING, WITHOUT RESIDENCE.

The Warden and Senate of the University of Durham, with the view of affording to Practitioners of fifteen years' standing an opportunity of obtaining the degree of Doctor in Medicine, have instituted a Special Examination, under the following Regulations :—

1. That the Candidate shall be registered by the General Council of Medical Education and Registration of the United Kingdom.

2. That the Candidate shall have been in the active practice of his Profession for fifteen years as a Qualified Practitioner.

3. That the Candidate shall not be under 40 years of age.

4. That the Candidate shall produce a certificate of moral character from three registered Members of the Medical Profession.

5. That if the Candidate shall not have passed previously to his Professional Examination (in virtue of which he has been placed on the Register) an Examination in Arts, he shall be required to pass an Examination in Classics and Mathematics.

The Subjects for this Examination shall be as follows :—

1. An English Essay. (A short Essay on some subject to be specified at the time of the Examination.)
2. Arithmetic.
3. Euclid—Books i. and ii.
4. Latin—Translation from Virgil, Æneid, Books i. and ii., with Grammatical Questions.
5 One of the following Subjects :—
    - i. Greek—Translation from Xenophon's Memorabilia, Books i. and ii., with Grammatical Questions.

ii. French—Translations from Voltaire's Charles XII., with Grammatical Questions.

iii. German—Translation from Goethe's "Dichtung und Wahrheit," Book i., with Grammatical Questions.

iv. Elements of Mechanics, Pneumatics, and Hydrostatics.

v. Some Treatise on Moral, Political, or Metaphysical Philosophy.

6. That if the Candidate shall have passed, previously to his Professional Examination (in virtue of which he has been placed on the Register), a Preliminary Examination, he shall be required to translate into English passages in any of the parts specified below of any one of the Latin Authors mentioned :—

Cæsar—De Bello Gallico, first three books.

Virgil—First three books of the Æneid.

Celsus—First three books.*

The Candidate shall have an opportunity of showing proficiency in Greek, Moral Philosophy, or some Modern Language.†

7. That the Candidate shall be required to pass an Examination in the following Subjects :—

i. Principles and Practice of Medicine, including Psychological Medicine, Hygiene, and Therapeutics.

ii. Principles and Practice of Surgery.

iii. Midwifery and Diseases of Women and Children.

iv. Pathology—Medical and Surgical.

v. Anatomy—Medical and Surgical.

vi. Medical Jurisprudence and Toxicology.

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* The Candidate may choose for himself any one of the three above-named authors.

† For these subjects no extra marks are awarded.

The Examination shall be conducted by printed papers of questions, clinically in the wards of the Royal Infirmary, Newcastle, and by *viva voce* Examination.

8. Natives of India, or of the British Colonies, will be placed on the same footing as Natives of Great Britain. Candidates who are 40 years of age, and have been engaged in actual practice for fifteen years, can proceed to the M.D. Degree Examination for Practitioners in accordance with the regulations on page 72 of the Calendar, provided they bring evidence from one of the Indian Universities that they have passed within one year of their presenting themselves for the Examination for the Practitioners' Degree at the University of Durham, an Examination in Latin, and in addition, either Greek, Persian, or Sanskrit.

9. That the fee shall be 50 guineas.

10. That if the Candidate shall fail to satisfy the Examiners, the sum of 20 guineas shall be retained ; but that if he shall again offer himself for the Examination, the sum of 40 guineas only shall then be required.

The Classical portion of the Examination may be taken separately from the Medical portion. For the Classical portion the fee is 10 guineas, which is deducted subsequently from the full fee of 50 guineas.

If the Candidate fail to satisfy the Examiners in the Arts portion of the Examination, a fee of 5 guineas will be required for every subsequent Examination.

Examinations, in accordance with the above Regulations, will be commenced on September 21st, 1896, and again on April 19th, 1897, and again on September 20th. 1897, at the College of Medicine, Northumberland Road, Newcastle-upon-Tyne.

Gentlemen intending to present themselves as Candidates are required to forward their names to Professor Howden, M.A., M.B., Secretary of the University of Durham College of Medicine, Newcastle upon-Tyne, at least 28 days before the commencement of the Examination, together with the fee and the before-mentioned certificates.

DEGREE OF BACHELOR IN HYGIENE
(B.HY.).

REGULATIONS.

I.—EDUCATION.

1. The Candidate shall be a Registered Medical Practitioner and a Graduate in Medicine of a recognised University.

2. He shall not be less than 22 years of age.

3. A period of at least twelve months shall have elapsed after the date when the Candidate obtained his first registrable qualification in Medicine, Surgery, and Midwifery, before he presents himself for examination.

4. He shall have spent six months of professional study subsequent to the attainment of a first registrable qualification in Medicine, Surgery, and Midwifery, in attendance at Newcastle-upon-Tyne, in the following manner:—

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.

(*a*) Course of Lectures on Public Health.

(*b*) Three Months' Course of Lectures on Comparative Pathology with practical work in a Bacteriological Laboratory.

Out-door Sanitary Work.

(*c*) Six Months' practical study of out-door Sanitary Work under the Medical Officer of Health, Newcastle-upon-Tyne.

City Hospital for Infectious Diseases, Newcastle-upon-Tyne.

(*d*) Three Months' attendance on the Clinical Practice and Instruction.

Regulation (*a*) to be omitted in the case of a Candidate who has already attended the course before obtaining a registrable qualification.

Regulation (*c*) to be omitted in the case of a Practitioner who has himself held appointment as a Medical Officer of Health under conditions not requiring the possession of a Sanitary Diploma under the Local Government (England and Wales) Act, 1888.

DURHAM COLLEGE OF SCIENCE.

(*e*) Course of Lectures on Sanitary Chemistry and Physics.

(*f*) Three Months' practical Instruction in a Chemical Laboratory. This course must not be concurrent with the three months' course of Lectures on Comparative Pathology with practical work in a Bacteriological Laboratory.

BOOKS RECOMMENDED.—Manual of Public Health, by Professor A. Wynter Blyth. Hygiene and Public Health, by Dr. Louis C. Parkes. Handbook of Hygiene, by Dr. Geo. Wilson. Comparative Pathology: Manual of Bacteriology, by Professor Crookshank; Bacteria and their Products, by Dr. G. Sims Woodhead; or, Practical Bacteriology, by Kanthack and Drysdale. Parasites of Man, by Leuckart. Sanitary Chemistry and Physics: Sanitary Examination of Water, Air, and Food, by Dr. C. B. Fox. Analysis of Water and Food, by Professor Wanklyn. Air, Water, and Disinfectants, by Mr. Noel Hartley. Dwelling Houses, by Professor Corfield. Meat Inspection, by Professor Walley. Aitken's Practice of Physic: Medical Geography. Law: The Statutes and Bye-laws named under the heading "Examination."—Section (c) on page 77.

II.—EXAMINATION.

The Candidate shall be required to pass an Examination in the following subjects:—

(*a*) SANITARY CHEMISTRY.—The examination of Air; detection of noxious gases and atmospheric impurities.

Water for sanitary purposes; detection of metals in water; the action of water on metals.

Milk and Food.

Detection of Poisons in Articles of Dress and Decoration.

(*b*) PHYSICS.—Hydrodynamics, Pneumatics, and Hydraulics, as applied to Hygiene.

Light; Propagation of Light; Reflection and Refraction; Photometry.

Heat; Thermometers; Laws of Heat in relation to Hygiene.

Principles of Hygrometry and Hygrometers.

(*c*) SANITARY LEGISLATION.—Knowledge of the following Statutes and Bye-Laws, viz.:—The Public Health Acts, Rivers Pollution Prevention Act, 1876; The Public Health (Water) Act, 1878; The Infectious Diseases (Notification) Act, 1889; The Local Government Act, 1889; The Infectious Diseases (Prevention) Act, 1890; The Housing of the Working Classes Act, 1890; The Public Health Acts (Amendment) Act, 1890; The Model Bye-Laws of the Local Government Board relating to Cleansing, the Prevention of Nuisances, New Streets and Buildings, Slaughter Houses, Common Lodging Houses, Houses Let in Lodgings, Offensive Trades.

Most of the above-mentioned *Statutes* will be found in KNIGHT & Co.'s "Public Health Acts" (latest edition), and the *Bye-Laws* in the work under that title, by the same publishers.

(*d*) COMPARATIVE PATHOLOGY, ETC.—Knowledge of the Comparative Pathology, Methods of Propagation, and Prevention of Microbic and Parasitic Diseases intertransmissible between Man and the lower Animals; Morphology of Microbes and Animal Parasites; Methods of Microscopical Examination and Artificial Cultivation of Micro-organisms. The Bacteriological Examination of Water, Air, and Earth; The Special Characteristics, Life-history, Properties, and Natural and Artificial Modes of Inoculation of Pathogenic Micro-organisms and Animal Parasites.

(*e*) Vital Statistics.—Rates of Birth, Death, and Marriage; Methods of Calculation, Classification, and Tabulation of Returns of Sickness and Mortality; Data required and Conclusions deducible therefrom.

(*f*) Nosology.—Definition, Nomenclature, and Classification of Diseases.

(*g*) Meteorology, Climatology, and Geographical Distribution of Health and Disease over the Globe, and in different Urban and Rural Districts of the United Kingdom.

(*h*) Sanitary Medicine, in relation to the Origin, Propagation, Pathology, and Prevention of Epidemic, Endemic, Epizootic, and other Communicable Diseases; Diseases attributable to Heat, Cold, or Dampness, Insufficiency or Impurity of Air, Food, or Drink; Parasitic and other Diseases affecting the Food and Drink of Man; Diseases due to Habitation, in Cities, Towns, Villages, and separate Houses; Occupation and Trade Operations in relation to the Health of the Workers; Overwork, Intemperance, Heredity; Preventive Measures, Vaccination, Isolation, Disinfection; the Regulation of Noxious and Offensive Manufactures and Trades; the Removal of Nuisances.

(*i*) Practical Hygiene in reference to Meteorological Apparatus, Sanitary Appliances, the Site, Materials, Construction, Capacity, Lighting, Ventilation, Warming, Dryness, Water Supply, Drainage, and Refuse, Disposal of Houses, Schools, Hospitals, Artizans' Dwellings, Workshops and Work-places, and other buildings of Public or Private Resort; the Construction of Dairies, Abattoirs, and Disinfecting Stations; Action with respect to Nuisances, and Outbreaks of Disease; The Examination of Butchers' Meat and other Food; The Preparation of Sanitary Reports, and other Duties of a Medical Officer of Health.

The Examination will be conducted by written Papers, and practical and *vivâ voce* examination, and will be commenced on September 14th, 1896, April 12th, 1897, and September 13th, 1897.

The Candidate shall also be required—

(*a*) To pass an examination on medical clinical cases at the City Hospital for Infectious Diseases, or elsewhere.

(*b*) To draw up outlines for Annual or other reports of a Medical Officer of Health.

(*c*) To report upon the condition of some actual locality.

(*d*) To analyse liquids, gases, and specimens of food.

(*e*) To describe the construction and use of Instruments employed in Meteorology, Hygienic Apparatus, and Sanitary Appliances.

(*f*) To examine with the Microscope submitted specimens.

(*g*) To describe submitted specimens of Diseased Organs and Tissues (Human and other).

(*h*) To show a practical acquaintance with the usual methods of Bacteriological investigation.

(*i*) To inspect and describe carcases.

Every Candidate wishing to present himself for Examination for the Degree of Bachelor in Hygiene must give at least *twenty-eight days' notice* to Professor Howden, Secretary of the College, and must, at the same time, send the Examination fee and the necessary Certificates.

The Fee for the Examination for the Degree of B.Hy. is Ten Guineas, and for the Degree, Six Guineas.

Holders of the Licence in Sanitary Science of the University of Durham, prior to January, 1892, who are Graduates in Medicine of the University of Durham, are entitled to admission to the Examination for the Degree of Bachelor in Hygiene without residence.

REGULATIONS FOR THE DEGREE OF DOCTOR IN HYGIENE (D.Hy.).

1. The Candidate shall be a Bachelor in Hygiene.

2. The Candidate shall have been engaged for two years subsequent to the date of his acquirement of the Degree of Bachelor in Hygiene, in practice, as a Medical Officer of Health.

3. The Candidate shall write an essay upon some practical Hygienic subject, selected by himself and approved by the Lecturer on Public Health, and shall be examined thereon, and upon questions relative to the subject of the Essay.

Candidates, for their Essays, must use ruled blue laid foolscap paper (16 lbs. per ream weight) with a margin on the left hand side one inch and a half in breadth, and must write on one side of the paper only. The Essay should not exceed twenty pages.

The Essays must be forwarded to the Lecturer on Public Health one month before the date of the Examination, and will be retained by the Faculty of Medicine. If the Essay of any Candidate is not of sufficient merit, notice of the fact will be sent to the Candidate, who will not be required to attend for examination.

The Fee for the Examination for the Degree of D.Hy. is £5 and the Degree £6 6s.

REGULATIONS FOR THE DIPLOMA IN PUBLIC HEALTH (D.P.H.).

The Regulations for Education and Examination for the Diploma in Public Health (D.P.H.) are the same as those for the Degree of Bachelor in Hygiene on pages 75 to 79, with the following exceptions, viz.:—

1. That the Candidate is not required to be a Graduate in Medicine of a recognised University.

2. The course of study need not be spent at Newcastle-upon-Tyne.

The Fee for the Examination and Diploma is Ten Guineas.

REGULATIONS FOR THE DIPLOMA IN PUBLIC HEALTH, FOR MEDICAL PRACTITIONERS, REGISTERED, OR ENTITLED TO BE REGISTERED, ON OR BEFORE JANUARY 1ST, 1890.

1. The Candidate shall be a Medical Practitioner, registered, or entitled to be Registered, on or before January 1st, 1890.

2. The Candidate shall be required to pass the same Examination as that for the ordinary Diploma in Public Health, on pages 76 to 79.

3. Every Candidate wishing to present himself for the Examination must give, at least, *twenty-eight days' notice* to Professor Howden, Secretary of the College, and must, at the same time, send the Examination Fee and the necessary Certificates.

4. The Fee for the Examination and Diploma is Ten Guineas.

DIRECTIONS FOR CANDIDATES.

Academical costume to be worn at all the Examinations, except the Practical, and except in the case of Practitioners of fifteen years' standing. Strict punctuality is essential. Candidates who fail to appear when they are called will not be afterwards received, and they will, consequently, lose the marks of the Examination they have not attended.

Any Candidate copying or communicating with others during an Examination will be dismissed, and not allowed to present himself again for Examination.

Particular attention should be paid to the rules respecting numbers, as it is essential that every paper handed in should be properly numbered.

Each Candidate at the commencement of the Examination will be placed at a desk on which his number will be fixed. He should at once gum one of the printed numbers given him on to the card provided, and write his name below the number. The card is then to be enclosed in an envelope and sealed, another of the coloured numbers being affixed to the outside of the envelope.

The separate sheets of paper, on which the answers are written, are to be fixed together by a clip, which should be inserted at the left hand top corner. One of the coloured numbers is to be placed at the right hand top corner of each set of answers. At the end of each Written Examination the answers are to be handed in to the Superintendent of the Examination. The sheets are not to be folded.

Candidates are forbidden to make any inquiry of an Examiner as to the result of an Examination. The Superintendent is the only person authorised to give information upon the subject of the Examination.

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PROGRAMMES OF EXAMINATIONS.

EXAMINATIONS FOR THE DEGREE OF BACHELOR IN MEDICINE.

(*A*) For Candidates registered *before* January 1st, 1892 (4 years' curriculum).

FIRST EXAMINATION.

MONDAY ...	Sept. 7, 1896, and April 5, 1897,	9·45 a.m. to 1 p.m. ...	Elementary Anatomy.
		2·30 p.m. to 5·30 p.m.	Elementary Physiology.
TUESDAY	Sept. 8, 1896, and April 6, 1897,	10 a.m. to 1 p.m. ...	Chemistry, with Chemical Physics.
		2·30 p.m. to 5·30 p.m.	Botany, with Medical Botany.
WEDNESDAY and THURSDAY	Sept. 9 and 10, 1896, and April 7 and 8, 1897,	10 a.m. ...	*Practical* Chemistry.
FRIDAY ...	Sept. 11, 1896, and April 9, 1897,	9 30 a m.	*Vivâ voce* in all the subjects of the Examination.

SECOND EXAMINATION.

MONDAY ...	Sept. 14. 1896, and Apr. 12, 1897,	9·45 a.m. to 1 p.m. ...	Anatomy.
		2·30 p.m. to 5·30 p.m.	Physiology.
TUESDAY	Sept. 15, 1896, and Apr. 13, 1897.	10 a.m. to 1 p.m. ...	Materia Medica.
THURSDAY	Sept. 17, 1896, and Apr. 15, 1897,	9·30 a.m.	*Practical* and *vivâ voce* Examination in all the subjects of the Examination.
FRIDAY ...	Sept 18, 1896, and Apr. 16, 1897,	9·30 a.m.	*Practical* and *vivâ voce* Examination in all the subjects of the Examination.

THIRD (FINAL) EXAMINATION.

MONDAY ...	Sept. 21, 1896, and Apr. 19, 1897,	9·45 a.m. to 1 p.m. ...	Principles and Practice of Medicine.
		2·30 p.m. to 5·30 p.m.	Principles and Practice of Surgery — 5 questions. Surgical Anatomy — 1 question.
TUESDAY	Sept. 22, 1896, and Apr. 20, 1897,	10 a.m. to 1 p.m. ...	Medical Jurisprudence, PublicHealth
		2·30 p.m. to 5·30 p.m.	Pathology. Midwifery and Diseases of Women and Children.
WEDNESDAY and THURSDAY	Sept. 23 and 24, 1896, and April 21 and 22, 1897,	9·30 a.m. ...	*Clinical* Examination in Medicine and Surgery.
FRIDAY ...	Sept. 25, 1896, and Apr. 23, 1897,	9 a.m....	*Vivâ voce* Examination in all the subjects.

(*B*) For Candidates registered on or *after* January 1st, 1892 (5 years' curriculum).

FIRST EXAMINATION.

MONDAY ...	Sept. 7, 1896, and April 5, 1897,	9·45 a.m. to 1 p.m. ...	Elementary Anatomy.
		2·30 p.m. to 5·30 p.m.	Elementary Biology.
TUESDAY	Sept. 8, 1896, and April 6, 1897,	10 a.m. to 1 p.m. ...	Chemistry.
		2·30 p.m. to 5·30 p.m.	Physics.
WEDNESDAY and THURSDAY	Sept. 9 and 10, 1896, and April 7 and 8, 1897,	10 a.m. and 2·30 p.m.	*Practical* Chemistry. *Practical* Physics. *Practical* Biology.
FRIDAY ...	Sept. 11, 1896, and April 9, 1897,	9·30 a.m.	*Vivâ voce* in all the subjects of the Examination.

SECOND EXAMINATION.

MONDAY ...	Sept. 14, 1896, and Apr. 12, 1897,	9·45 a.m. to 1 p.m. ...	Anatomy.
		2·30 p.m. to 5·30 p.m.	Physiology.
TUESDAY...	Sept. 15, 1896, and Apr. 13, 1897,	10 a.m. to 1 p.m. ...	Materia Medica.
THURSDAY	Sept. 17, 1896, and Apr. 15, 1897,	9·30 a.m.	*Practical* and *vivâ voce* Examination in Anatomy. *Practical* and *vivâ voce* Examination in Physiology. *Vivâ voce* in Materia Medica.
FRIDAY ...	Sept. 18, 1896, and Apr. 16, 1897,	9·30 a.m.	*Practical* and *vivâ voce* Examination in Anatomy (continued). *Practical* and *vivâ voce* Examination in Physiology (continued). *Vivâ voce* Examination in Materia Medica (continued).

THIRD EXAMINATION.

MONDAY ...	Sept. 21, 1896, and Apr. 19, 1897,	9·45 a.m. to 1 p.m. ...	Pathology.
		2·30 p.m. to 5·30 p.m.	Medical Jurisprudence.
TUESDAY	Sept. 22, 1896, and Apr. 20, 1897,	10 a.m. to 1 p.m. ...	Public Health.
THURSDAY	Sept. 24, 1896, and Apr. 22, 1897,	2·30 p.m.	*Vivâ voce* Examination in all the subjects.

FOURTH (FINAL) EXAMINATION.

Monday ...	Apr. 19,1897, and Sept.20,1897,	9·45 a.m. to 1 p.m. ...	Principles and Practice of Medicine and Psychological Medicine.
		2·30 p.m. to 5·30 p.m.	Principles and Practice of Surgery — 5 questions. Surgical Anatomy–1 question.
Tuesday	Apr. 20,1897, and Sept.21,1897,	10 a.m. to 1 p.m. ...	Midwifery and Diseases of Women and Children.
Wednesday and Thursday	Apr. 21 & 22, 1897 and Sept. 22 & 23, 1897,	9·30 a.m. ...	Clinical Examination in Medicine and Surgery.
Friday ...	Apr. 23,1897, and Sept.24,1897,	9 a.m.	*Vivâ voce* Examination in all of the subjects.

EXAMINATION FOR THE DEGREE OF DOCTOR IN MEDICINE FOR PRACTITIONERS OF FIFTEEN YEARS' STANDING.

Monday ...	Sept.21,1896, and Apr. 19,1897,	9·45 a.m. to 1 p.m. ...	Medicine and Allied Sciences.
		2·30 p.m. to 5·30 p.m.	Surgery and the Allied Sciences.
Tuesday	Sept.22,1896, and Apr. 20,1897,	10 a.m. to 1 p.m. ...	*Arts* Examination.
Tuesday	Sept.22,1896, and Apr. 20,1897,	2·30 p.m. to 5·30 p.m.	Midwifery, Medical Jurisprudence, Pathology.
Wednesday ...	Sept.23,1896, and Apr. 21,1897,	9·30 a.m.	*Clinical* Examination in Medicine and Surgery.

Friday ...	Sept. 25, 1896, and Apr. 23, 1897,	9 a.m....	*Vivâ voce*	Medicine. Surgery. Midwifery. Medical Jurisprudence. Public Health. Pathology.

EXAMINATION FOR THE DEGREE OF DOCTOR IN MEDICINE.

Wednesday ...	Sept. 23, 1896, and Apr. 21, 1897,	2 p.m....	... ...	*Vivâ voce* on Essays—in the Council Room, College of Medicine, Newcastle-upon-Tyne.

EXAMINATION FOR DEGREE OF BACHELOR IN SURGERY.

Wednesday ...	Sept. 23, 1896, and Apr. 21, 1897,	2 p.m....	... ...	*Practical* Examination in Operations on the dead subject, and on the use of Instruments.

EXAMINATION FOR THE DEGREE OF MASTER IN SURGERY.

Monday ...	Sept. 21, 1896, and Apr. 19, 1897,	9·45 a.m. to 1 p.m.		Principles and Practice of Surgery, 6 questions, of which 4 only must be answered.
Monday ...	Sept. 21, 1896, and Apr. 19, 1897,	2·30 to 5·30 p.m.	...	Surgical Anatomy, 3 questions; Surgical Pathology, 3 questions; of which 2 only in each division must be answered.

Wednesday ...	Sept.23,1896, and Apr.21, 1897,	9·30 a.m.	*Clinical Surgery*, not less than 3 cases; Surgical Instruments and Appliances.
		2 p.m.	Surgical Operations.
Friday ...	Sept.25,1896, and Apr.23, 1897,	9 a.m.	*Vivâ voce* Examination.

EXAMINATION FOR THE DEGREE OF BACHELOR IN HYGIENE, AND FOR THE DIPLOMA IN PUBLIC HEALTH.

Monday.—Sept. 14th, 1896; April 12th, 1897; Sept. 13th, 1897.

9·45 a.m. to 1 p.m.

To report upon the conditions of some specified locality. To draw up outlines for annual or other reports of a Medical Officer of Health.

2·30 to 5·30 p.m.

Paper No. 1....	Sanitary Legislation	1	6 Questions.
	Nosology	1	
	Sanitary Medicine	4	

Tuesday.—Sept. 15th, 1896; April 13th, 1897; Sept. 14th, 1897.

10 a.m. to 1 p.m.

Paper No. 2 ... ... Comparative Pathology.—Six Questions.

2·30 to 5·30 p.m.

Practical Chemistry.

Analyses.—Liquids, Gases, and Specimens of Food.

Wednesday.—Sept. 16th, 1896; April 14th, 1897; Sept. 15th, 1897.

10 a.m. to 1 p.m.

Paper No. 3.—Sanitary Chemistry and Physics.—Six Questions.

2·30 to 5·30 p.m.

Practical Bacteriology.

Thursday.—Sept. 17th, 1896; April 15th, 1897; Sept. 16th, 1897.

9·30 a.m.

Clinical Examination.—At the City Hospital for Infectious Diseases or elsewhere.

2·30 to 5·30 p.m.

Paper No. 4 ...	Vital Statistics	1	6 Questions.
	Climatology, Meteorology, etc....	1	
	Practical Hygiene	4	

Friday.—Sept. 18th, 1896; April 16th, 1897; Sept. 17th, 1897.

9·30 a.m.

Vivâ voce.—Description of Diseased Organs.—Microscopical Examination.

EXAMINATION FOR THE DEGREE OF DOCTOR IN HYGIENE.

Tuesday...	Sept. 15, 1896, and Apr. 13, 1897,	10 a.m.	*Vivâ voce* on essays—in the Council Room, College of Medicine, Newcastle-on-Tyne.

FEES FOR THE EXAMINATIONS, DEGREES, AND DIPLOMA.

	£	s.	d.
For Registration Examination	1	0	0
,, Extraordinary Registration Examination	2	0	0
,, Preliminary Arts Examination for Degrees	1	0	0
,, First Examination for Degree of Bachelor in Medicine	5	0	0
,, Second Examination for Degree of Bachelor in Medicine	5	0	0
,, Third Examination for Degree of Bachelor in Medicine	5	0	0
,, *Final Examination for Degree of Bachelor in Medicine	10	0	0
,, the Examination for the Degree of M.D.	5	0	0
,, the Examination for the Degree of B.S.	5	0	0
,, the Examination for the Degree of M.S.	5	0	0
,, Examination for the Degree of Bachelor in Hygiene	10	10	0
,, Examination for the Degree of Doctor in Hygiene ...	5	0	0
,, Examination for and for the Diploma in Public Health	10	10	0
,, the Examination for and for the Degree of Doctor in Medicine, for Practitioners of fifteen years' standing...	52	10	0
,, a Degree of Bachelor in Medicine	6	6	0
,, a Degree of Doctor in Medicine	6	6	0
†,, a Degree of Bachelor in Surgery	6	6	0
,, a Degree of Master in Surgery	6	6	0
,, a Degree of Bachelor in Hygiene	6	6	0
,, a Degree of Doctor in Hygiene...	6	6	0

* The Fee of Ten Pounds for the Final Examinations will be required from Candidates who have entered at the University of Durham College of Medicine, Newcastle-upon-Tyne, on or after May 1st, 1885, and from Candidates from other Schools of Medicine who commenced their professional studies on or after October 1st, 1883.

† These Fees are paid to the Senior Proctor of the University of Durham on the morning of Convocation, if the Candidate is successful in passing the examination.

The Examinations for Degrees are held at Newcastle-upon-Tyne, and the Degrees conferred in Convocation at the University of Durham, or at Newcastle-upon-Tyne.

SYNOPSES

Of the Subjects included in the Examinations for the Degrees in Medicine of the University of Durham.

FIRST EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.

NEW REGULATIONS.

(1) Elementary Anatomy—

Bones, Joints, Ligaments, and Muscles of the Body generally.

(2) Chemistry—

General characteristics of Chemical action. Conditions under which Chemical Changes take place. Difference between Mechanical Mixtures and Chemical Compounds. Difference between Elementary and Compound Substances. Explanation of Chemical Symbols, Formulæ, and Equations. Calculation of Quantities of Materials necessary to produce or resulting from given Chemical Reactions. Conversion from Volume into Weight and *vice versa.* Corrections for Temperature and Pressure in the Measurements of the Volumes of Gases.

Characteristics of Acids, Bases, and Salts. Nomenclature. Laws of Chemical Combination. Combination of Gases by Volume. The Atomic Theory. Molecules and Molecular Weights. Avogadro's Hypothesis.

Hydrogen, Oxygen, Ozone, Water, its Physical and Chemical Properties. Hydrogen Peroxide. Nitrogen. The Atmosphere, its Relations to Life. Combustion. Diffusion of Gases. Principles of Ventilation. Ammonia and Ammonium Compounds, Nitric Acid, and Nitrates. Oxides of Nitrogen. Nitrous Acid and Nitrites.

Carbon, Carbon Monoxide, Carbon Dioxide. Carbonates. Marsh Gas, Olefiant Gas, Coal Gas. Flame, its Structure and Luminosity. Chlorine, Bromine, Iodine, and Fluorine, and their commonly occurring Compounds.

Sulphur, Sulphuretted Hydrogen and Sulphides, Sulphur Oxides, Sulphuric Acid and Sulphates, Sulphurous Acid and Sulphites.

Phosphorus, Arsenic, and Antimony, and their compounds with Oxygen and with Hydrogen. Phosphoric Acid and Phosphates, Arsenious Acid and Arseniates, Arsenic Acid and Arseniates. The detection of Phosphorus, Arsenic, and Antimony. Boron, Boracic Acid and Borates.

General properties of the more common Metals and their Compounds. The preparation and properties of such as are used in Medicine.

Differences between Organic and Inorganic Compounds, and Organic and Organised Bodies. Methods of determining the composition of Organic Compounds.

Explanation of the terms "Homologue," "Isomerism," "Polymerism," "Metamerism."

Cyanogen, Hydrocyanic Acid, Cyanic Acid and Urea, Uric Acid.

General Characteristics of Hydro-carbons, Alcohols, Ethers, Ethereal Salts, Amines, Aldehydes, Acids, Ketones, Amides.

Methyl and Ethyl Alcohols, their more important derivatives. Acetic Acid and its derivatives. Glycol. Lactic Acid and its homologues. Oxalic Acid and its homologues. Malic and Tartaric Acids.

Glycerine. Fats. Saponification. Allyl Compounds. Carbohydrates. Fermentation. Benzene, Phenol, Benzoic Acid, Salicylic Acid. Glucosides.

Principal Vegetable Acids. The Alkaloids, Nicotine, Conine, Morphine, Strychnine, Brucine, Quinine, Cinchonine. Chemical constituents of Vegetable and Animal Organisms.

(3) Practical Chemistry—

The Examination will consist in the Qualitative Analysis of solutions or powders, containing not more than one acid or one base, also the preparation of simple compounds. The bases contained in these may be any one of those following, and may be combined with any of the commoner acids :—

Potassium, Sodium [Ammonium].

Calcium, Barium, Strontium, Magnesium, Iron, Manganese, Aluminium, Zinc, Chromium, Copper, Mercury, Lead, Bismuth, Tin, Arsenic, Antimony, and Silver.

The Candidate will be expected to be familiar with the methods of detecting the following substances :—Urea, Uric Acid, Grape Sugar, Morphine, Strychnine, Brucine, Cinchonine, Quinine.

(4) Physics—

Experimental Mechanics—

Laws of Motion considered experimentally, and simple applications. General properties of Solids, Liquids and Gases treated in an elementary manner.

Heat—

Thermometry. Coefficients of Expansion. Calorimetry. Change of State. Hygrometry. Conduction, Convection, and Radiation.

Magnetism and Electricity—

Simple Phenomena in Magnetism. Batteries: their Constitution and use. The Magnetic, Chemical, and Heating effects of the Electric Current, Ohm's Law, Simple Phenomena of Induced Currents. Elementary Phenomena in Electrostatics.

Optics—

Propagation, Reflection, and Refraction of Light. Formation of Images by Mirrors and Lenses. The Prism.

(5) Practical Physics—

Candidates will be expected to be familiar with the use of simple Physical Instruments, and to perform simple experiments in Experimental Mechanics, Heat, Electricity, and Optics.

(6) Elementary Biology—

(1) The distinctive properties of Living and Non-living Bodies.—The general conditions favourable and unfavourable to Life.

The structure, growth, and chemical composition of the cell-wall, protoplasm, and nucleus. The properties of protoplasm. The growth, modification, and division of cells. Formation of tissues. Division of labour. Members and Organs.

(2) The differences between Animals and Plants.

(3) The Structure, Morphology, Physiology, and Life-histories of:—*Saccharomyces* (Yeast); *Bacterium; Mucor* (Mould); *Fucus* (Brown Seaweed); Fern. Fermentation; Putrefaction.

(4) The Anatomy, Morphology, and Physiology of the Flowering Plant as illustrated by a consideration of the structure and functions of Stem, Leaf, and Root. The various parts of the Flower and their functions. Fertilisation. The production, dispersal, and germination of Seeds and Fruits.

(5) The general characteristics of Invertebrate and Vertebrate Animals.

(6) The Anatomy, Morphology and Life-histories of the Invertebrata as exemplified by the study of *Amœba*, *Vorticella*, *Hydra*, *Lumbricus* (Earthworm), *Astacus* (Crayfish).

(7) The Anatomy and Morphology of the Vertebrata as exemplified by the study of the digestive, circulatory, respiratory, urogenital and nervous systems of the *Amphioxus*, *Scyllium* (Dog-fish), *Rana* (Frog), and *Lepus* (Rabbit).

(8) The Comparative Morphology of the Skeletons of *Scyllium*, *Rana*, and *Lepus*.

(9) The various methods of reproduction—Vegetative, Asexual, and Sexual.

(10) The Structure of Ova and Spermatozoids and the elementary principles of Animal Embryology.

SECOND EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.

Old and New Regulations.

(1) Anatomy—

In addition to a general knowledge of the subject as tested by the written part of the Examination, each Candidate will be required to make a dissection on the recent subject. In the *vivâ voce* examination he will also be required to recognise parts on recent or prepared dissections, and to answer questions on Bones, Joints, etc. He must also have a knowledge of the more important facts regarding the development of the various systems.

(2) Physiology—

In addition to the written Paper, the Candidate will be expected to perform tests for the more commonly occurring

Physiological Products found in the Human Body, to explain the use of Physiological Instruments, and to recognise by the Microscope Histological Specimens.

(3) Materia Medica and Pharmacy, including the Physiological action of Drugs—

Recognition of the officinal Drugs of the New British Pharmacopœia, knowledge of sources whence they are obtained, and their general properties. The physical and chemical characteristics of Drugs derived from the Inorganic Kingdom, and of the active Principles of Drugs derived from the Organic Kingdom. The Impurities and Adulterations to which the principal Drugs in the Pharmacopœia are liable.

The several Pharmaceutical Groups. The Officinal Preparations of the more important Drugs. The essential ingredients in the more important Preparations and the proportion of these ingredients. The ordinary Doses of the principal Drugs and their Preparations.

THIRD EXAMINATION.

(New Regulations.)

1. Pathology.
2. Medical Jurisprudence.
3. Public Health.

FINAL EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.

(Old Regulations.)

1. Medicine and Clinical Medicine.
2. Surgery and Clinical Surgery.
3. Midwifery and Diseases of Women and Children.
4. Pathology.
5. Medical Jurisprudence.
6. Public Health.

FINAL EXAMINATION.

(New Regulations.)

1. Medicine, Clinical Medicine, and Pyschological Medicine.
2. Surgery and Clinical Surgery.
3. Midwifery and Diseaseas of Women and Children.

EXAMINATION FOR THE DEGREE OF BACHELOR IN SURGERY.

Surgical Operations.
Surgical Instruments.

EXAMINATION FOR THE DEGREE OF MASTER IN SURGERY.

Surgery, Principles and Practice.
Surgical Pathology.
Surgical Anatomy.
Surgical Operations.
Clinical Surgery.

EXAMINATION FOR THE DEGREE OF DOCTOR IN MEDICINE.

1. Examination on the Subject of an Essay written by the Candidate, and on the other subjects of the curriculum so far as they are related to the Subject of the Essay. (See pages 68 and 69.)

SUCCESSFUL CANDIDATES

FOR DEGREES IN MEDICINE, SURGERY, AND HYGIENE, AT THE UNIVERSITY OF DURHAM, 1895-96.

Doctor in Medicine for Practitioners of Fifteen Years' Standing.

April, 1895.

Ashe, William Percy, M.R.C.S., L.R.C.P.
Ferrand, Edward, M.R.C.S., L.R.C.P.
Harris, Stanford, M.R.C.S., L.S.A.
Jones, Benjamin, M.R.C.S., L.R.C.P.
Latimer, Henry Arthur, M.R.C.S., L.S.A.
Moxon, William, M.R.C.S., L.R.C.S. Edin.
Taylor, John, L.R.C P. Edin., L.F.P.S. Glas.
Smith, Ebenezer Stanley, M.R.C.S., L.R.C.P.
Young, Thomas Frederic, M.R.C.S., L.S.A.

September, 1895.

Duke, Benjamin, M.R.C.S., L.S.A.
Duke, Edgar, M.R.C.S., L.S.A.
Hartley, Reginald, L.R.C.P. and S.
Hetherington, George Haynes, M.R.C.S., L.R.C.P.
Richards, John Ellison, L.R.C.P. and S. Edin.
Smith, Herbert Arthur, M.R.C.S., L.S.A.
Sykes, William, M.R.C.S., L.R.C.P.
Thomas, William Frederick, M.R.C.S., L.S.A.
Turner, Walter Pickett, M.R.C.S., L.S.A.
Woods, John Francis, M.R.C.S., L.S.A.

Doctor in Medicine (Essay).

April, 1895.

Appleby, George Henry Vane, M.B., B.S. Durh.
Fullerton, Francis William, M.B., B.S. Durh., M.R.C.S., L.R.C.P.
Green, Reginald, M.B., B.S. Durh.
Hodgins, Walter William, M.B., B.S. Durh., M.R.C.S., L.R.C.P.
Maidlow, William Harvey, M.B., B.S. Durh., F.R.C.S.
Marson, Francis Herbert, M.B., B.S. Durh., M.R.C.S., L.R.C.P.
Shore, Harry, M.B., B.S. Durh.
Thorne-Thorne, Berthold Bezley, M.B., B.S. Durh., M.R.C.S., L.R.C.P.

September, 1895.

Baker, John Hopper, M.B. Durh.
Braithwaite, John, M.B., B.S. Durh.
Beattie, Thomas, M.B., B.S. Durh.
Dow, William Alexander, M.B., B.S. Durh.
Eyre, John William Henry, M.B , B.S. Durh.
Harker, William Edmund, M.B., B.S. Durh.
Meade-King, Richard Liddon, M.B., B.S. Durh.
Metcalfe, George, M.B., B.S. Durh., M.R.C.S., L.R.C.P.
Rutter, Francis Burchett, M.B., B.S. Durh.
Syrett, Frank, M.B., B.S. Durh.
Thorne-Thorne, Leslie Cavendish, M.B., B.S. Durh., M.R.C.S.

Doctor in Medicine—Gold Medallist for the year 1895.

Beattie, Thomas, M.B., B.S. Durh.

Doctor in Hygiene.

April, 1895.

Turnbull, William Henry, M.B., B.S., B.Hy. Durh.

Master in Surgery.

April, 1895.

Martin, William, M.A., M.B., B.S. Durh.

Bachelor in Medicine—Final Examination.

April, 1895.

Honours—First Class.

Brough, Charles Allan La Touche, L.R.C.P. & S. Edin., College of Medicine, Newcastle-upon-Tyne.

Honours—Second Class.

White, James Atkin Henton, Mason College, Birmingham.
Prior, John Ralph, King's College.
Turner, Edward, St. Bartholomew's.
Hawley, Sidney Herbert, Mason College, Birmingham.
Senior, Harold Dickinson, Charing Cross Hospital.

Pass List.

Bennett, Norman, College of Medicine, Newcastle-upon-Tyne.
Cooper, Robert Montagu le Hunte, St. Mary's Hospital.
Charlton, William I'Anson, College of Medicine, Newcastle-upon-Tyne.
Davidson, Percival, College of Medicine, Newcastle-upon-Tyne.

Frazer, Ernest Edward, Guy's Hospital.
Fothergill, Ernest Rowland, Guy's Hospital.
Ford, Frank Chubb, M.R.C.S., St. Bartholomew's.
Fuller, John Reginald, St. Mary's Hospital.
Fielden, Edward, College of Medicine, Newcastle-upon-Tyne.
Gilmour, Richard Withers, St. Bartholomew's.
Gocher, Gilbert, Guy's Hospital.
Hanks, Charles, College of Medicine, Newcastle-upon-Tyne.
Kendall, Ernest Robert, College of Medicine, Newcastle-upon-Tyne.
Kingdon, Wilfred Robert, College of Medicine, Newcastle-upon-Tyne.
Middlemist, George Edwyn, London Hospital.
Peake, William Harland, Guy's Hospital.
Paterson, Marcus Sinclair, St. Mary's.
Satchell, Ernest Percy, Mason College, Birmingham.
Scott, George William, College of Medicine, Newcastle-upon-Tyne.
Sanderson, Tom, College of Medicine, Newcastle-upon-Tyne.

SEPTEMBER, 1895.

Honours—First Class.

Beven, Octavius, M.R.C.S., L.R.C.P., Guy's Hospital.

Honours—Second Class.

Turnbull, William, College of Medicine, Newcastle-upon-Tyne.
Gwynn, Neville Claude, M.R.C.S., L.R.C.P., Bristol Medical School.
Grace, John Johnston, Otago, New Zealand.
Fraser, Lachlan George, College of Medicine, Newcastle-upon-Tyne.
Hatch, Herbert Lincoln, M.R.C.S., L.R.C.P., St. Mary's Hospital.

Pass List.

Adamson, John Robert, College of Medicine, Newcastle-upon-Tyne.
Barker, Sam, St. Thomas' Hospital.
Baker, Alexander, B.A., St. Thomas' Hospital.
Carpenter, William Stanley, M.R.C.S., L.R.C.P., St. Mary's Hospital.
Crichton, Harry, College of Medicine, Newcastle-upon-Tyne.
De Lacey, Robert Charles, College of Medicine, Newcastle-upon-Tyne.
Fell, William George, College of Medicine, Newcastle-upon-Tyne.
Fothergill, Leopold, College of Medicine, Newcastle-upon-Tyne.
Gourley, Harry Harte, L.R.C.P. and S. Edin., College of Medicine, Newcastle-upon-Tyne.
Harbottle, George William, College of Medicine, Newcastle-upon-Tyne.
Hobbs, Allen Holmested, College of Medicine, Newcastle-upon-Tyne.
Manford, John Stanley, College of Medicine, Newcastle-upon-Tyne.

O'Brien, Christopher Michael, L.R.C.P. and S. Ireland, Trinity College, Dublin, and Middlesex Hospital, London.
Rowell, William Henry, College of Medicine, Newcastle-upon-Tyne.
Rowland, Walker John, B.A., Guy's Hospital.
Sutton, Frederick Reginald, Mason College, Birmingham.
Stewart, Charles, L.S.A., College of Medicine, Newcastle-upon-Tyne.
Walker, Frederick Septimus, College of Medicine, Newcastle-upon-Tyne.

Bachelor in Surgery.

April, 1895.

Bennett, Norman, College of Medicine, Newcastle-upon-Tyne.
Charlton, William I'Anson, College of Medicine, Newcastle-upon-Tyne.
Cooper, Robert Montagu le Hunte, St. Mary's.
Davidson, Percival, College of Medicine, Newcastle-upon-Tyne.
Frazer, Ernest Edward, Guy's Hospital.
Fuller, John Reginald, St. Mary's.
Fothergill, Ernest Rowland, Guy's Hospital.
Fielden, Edward, College of Medicine, Newcastle-upon-Tyne.
Gilmour, Richard Withers, St. Bartholomew's.
Gocher, Gilbert, Guy's Hospital.
Hanks, Charles, College of Medicine, Newcastle-upon-Tyne.
Peake, William Harland, Guy's Hospital.
Paterson, Marcus Sinclair, St. Mary's.
Prior, John Ralph, King's College.
Satchell, Ernest Percy, Mason College, Birmingham.
Scott, George William, College of Medicine, Newcastle-upon-Tyne.
Sanderson, Tom, College of Medicine, Newcastle-upon-Tyne.
Turner, Edward, St. Bartholomew's.
White, James Atkin Henton, Mason College, Birmingham.

September, 1895.

Adamson, John Robert, College of Medicine, Newcastle-upon-Tyne.
Beven, Octavius, M.R.C.S., L.R.C.P., Guy's Hospital.
Barker, Sam, St. Thomas' Hospital.
Baker, Alexander, B.A., St. Thomas' Hospital.
Brough, Charles Allan La Touche, L.R.C.P. and S. Edin., College of Medicine, Newcastle-upon-Tyne.
Crichton, Harry, College of Medicine, Newcastle-upon-Tyne.
De Lacey, Robert Charles, College of Medicine, Newcastle-upon-Tyne.
Fraser, Lachlan George, College of Medicine, Newcastle-upon-Tyne.
Fell, William George, College of Medicine, Newcastle-upon-Tyne.
Grace, John Johnston, Otago, New Zealand.
Gwynn, Neville Claude, M.R.C S., L.R.C.P., Bristol Medical School.

Harbottle, George William, College of Medicine, Newcastle-upon-Tyne.
Hatch, Herbert Lincoln, M.R.C.S., L.R.C.P., St. Mary's Hospital.
Hobbs, Allen Holmested, College of Medicine, Newcastle-upon-Tyne.
Kendall, Ernest Robert, College of Medicine, Newcastle-upon-Tyne.
Manford, John Stanley, College of Medicine, Newcastle-upon-Tyne.
Meaden, Charles, Bristol Medical School.
Rowell, William Henry, College of Medicine, Newcastle-upon-Tyne.
Sutton, Frederic Reginald, Mason College, Birmingham.
Stewart, Charles, L.S.A., College of Medicine, Newcastle-upon-Tyne.
Turnbull, William, College of Medicine, Newcastle-upon-Tyne.
Walker, Frederick Septimus, College of Medicine, Newcastle-upon-Tyne.

Bachelor in Hygiene.

April, 1895.

Awburn, George John, M.B., M.S. Edin.
Appleby, George Henry Vane, M.B., B.S. Durh.
Dunn, Robert Ayton, M.B., B.S. Durh., M.R.C.S., L.R.C.P.
Turner, Edward, M.B., B.S. Durh., M.R.C.S., L.R.C.P.
Willcox, Edward Cecil, M.B., B.S. Durh.

September, 1895.

Green, Reginald, M.B., B.S. Durh.

Diploma in Public Health (D.P.H.).

April, 1895.

Symons, William Henry, L.S.A.

September, 1895.

Gamlen, Harold Ernest, M.B., B.S. Durh.

Bachelor in Medicine—Second Examination.

April, 1895.

Honours—Second Class.

McKinlay, John Robert, Westminster Hospital.
Rix, Francis William, Westminster Hospital.
Swindale, John Aston, Mason College, Birmingham.

Pass List.

Adams, Thomas George Drabble, College of Medicine, Newcastle-upon-Tyne.
Arnold, Walter Osborne, College of Medicine, Newcastle-upon-Tyne.
Dickens, Charles Henry, St. Thomas' Hospital.
Ford, Frank Chubb, St. Bartholomew's Hospital.
Hulme, Thomas Haylock, London Hospital.

Markham, Henry Herbert, College of Medicine, Newcastle-upon-Tyne.
Patterson, Daniel Wells, College of Medicine, Newcastle-upon-Tyne.
Peverley, Walter Augustus, College of Medicine, Newcastle-upon-Tyne.
Phillips, Theodore John, College of Medicine, Newcastle-upon-Tyne.
Smith, Charles Seaver, Mason College, Birmingham.
Wilson, Robert Alfred, College of Medicine, Newcastle-upon-Tyne.
Woodman, Thomas, College of Medicine, Newcastle-upon-Tyne.

September, 1895.

Honours—First Class.

Turner, George Grey, College of Medicine, Newcastle-upon-Tyne.
Arnold, Edwin Gilbert Emerson, M.R.C.S., L.R.C.P., St. Thomas' Hospital.

Honours—Second Class.

Burrow, Vincent, St. Mary's Hospital.
Moorshead, Robert Fletcher, Bristol Medical School.
Streatfeild, Thomas, M.R.C.S., L.R.C.P., University College Hospital, London.
Coxon, Henry Coxon, College of Medicine, Newcastle-upon-Tyne.

Pass List.

Baker, Joseph Ellis, College of Medicine, Newcastle-upon-Tyne.
Cooke, Frank Anthony, College of Medicine, Newcastle-upon-Tyne.
Deans, William Wilkie, Yorkshire College, Leeds.
Fenn, Charles Edward, King's College.
Gover, John Maxwell, College of Medicine, Newcastle-upon-Tyne.
Johnson, Charles, College of Medicine, Newcastle-upon-Tyne.
Lankester, Ralph Albert Rogers, University College Hospital, London.
Lister, Walter Herbert, College of Medicine, Newcastle-upon-Tyne.
Milbanke, William Byron, College of Medicine, Newcastle-upon-Tyne.
Middlemiss, George Whitson, College of Medicine, Newcastle-upon-Tyne.
Pope, Francis, Mason College, Birmingham.
Regnart, Horace Clare, Guy's Hospital.
Stevens, Bertram Crossfield, St. Thomas' Hospital.

Bachelor in Medicine—First Examination.

(Old Regulations.)

April, 1895.

The following passed in Elementary Anatomy and Physiology, Chemistry with Chemical Physics, and Botany with Medical Botany:—

McKinlay, John Robert, Westminster Hospital.
Stevens, Bertram Crossfield, St. Thomas' Hospital.

The following passed in Anatomy and Physiology:—

Gibbs, Thomas Harold, College of Medicine, Newcastle-upon-Tyne.

The following passed in Chemistry with Chemical Physics, and Botany with Medical Botany:—

Burrow, Vincent, St. Mary's Hospital.
Crossman, Francis Ward, St. Bartholomew's Hospital.
Ellis, Henry Reginald, St Bartholomew's Hospital.
Hulme, Thomas Haylock, London Hospital.
Southam, Stanley, Owens College, Manchester.

The following passed in Botany with Medical Botany:—

Dickens, Charles Henry, M.R.C.S., L.R.C.P., St. Thomas' Hospital.

SEPTEMBER, 1895.

The following passed in Elementary Anatomy and Physiology, Chemistry with Chemical Physics, and Botany with Medical Botany:—

Bolton, Andrew Adams, College of Medicine, Newcastle-upon-Tyne.
Boyd, James William Hugh, College of Medicine, Newcastle-upon-Tyne.
Scott, John, Middlesex Hospital.
Richardson, Reginald Percy, Westminster Hospital.

The following passed in Chemistry with Chemical Physics:—

Arnold, Edwin Gilbert Emerson, M.R.C.S., L R.C.P., St. Thomas' Hospital.
Bailey, Ernest Castleigh, King's College Hospital.
Streatfeild, Thomas, M.R.C.S., L.R.C.P., University College Hospital, London.

The following passed in Chemistry with Chemical Physics, and Botany with Medical Botany:—

Martin, John Henry, College of Medicine, Newcastle-upon-Tyne.

Bachelor in Medicine—First Examination.

(NEW REGULATIONS.)

APRIL, 1895.

The following passed in Elementary Anatomy and Biology, Chemistry, and Physics:—

Honours—Second Class.

Routledge, Robert Lowis, College of Medicine, Newcastle-upon-Tyne.
Von Bergen, Carl Wahlgren, College of Medicine, Newcastle-upon-Tyne.

Pass List.

Arthur, Arthur Samuel, College of Medicine, Newcastle-upon-Tyne.
Cann, Thomas Ponsford, College of Medicine, Newcastle-upon-Tyne.
Davison, Henry Edward, College of Medicine, Newcastle-upon-Tyne.
Elliot, Thomas Stokoe, Cooke's School of Anatomy.
Eggleston, Henry, College of Medicine, Newcastle-upon-Tyne.
Hartigan, James Andrew, College of Medicine, Newcastle-upon-Tyne.
McConnell, James, College of Medicine, Newcastle-upon-Tyne.
Wilkinson, Edgar Sheldon, St. Bartholomew's Hospital.

The following passed in Elementary Anatomy and Biology :—

Brown, William Cowan, College of Medicine, Newcastle-upon-Tyne.
Fielden, Henry Adamson, College of Medicine, Newcastle-upon-Tyne.
Hemmans, Lawrence Fielder, College of Medicine, Newcastle-upon-Tyne.
Inman, Ernest, College of Medicine, Newcastle-upon-Tyne.
Kendal, Hugh Robert, College of Medicine, Newcastle-upon-Tyne.
Picton, Guy Brougham, College of Medicine, Newcastle-upon-Tyne.

The following passed in Chemistry and Physics :—

Watson, Thomas Blandford, College of Medicine, Newcastle-upon-Tyne.

The following passed in Biology and Physics :—

Bathurst, William Henry Isaacs, King's College.

The following passed in Elementary Anatomy, Chemistry, and Physics :—

Cooke, Francis Gerrard Hamilton, Cooke's School of Anatomy.

SEPTEMBER, 1895.

Honours—First Class.

Milligan, James, College of Medicine, Newcastle-upon-Tyne.

Honours—Second Class.

Gofton, Edward, College of Medicine, Newcastle-upon-Tyne.
Muirhead, James, College of Medicine, Newcastle-upon-Tyne.
Bailes, Norman Christian, College of Medicine, Newcastle-upon-Tyne.
Roberts, Norcliffe, College of Medicine, Newcastle-upon-Tyne.
Fawcus, Harold Ben, College of Medicine, Newcastle-upon-Tyne.
Sisam, William, Mason College, Birmingham.
Johnson, John Tyrer, College of Medicine, Newcastle-upon-Tyne.

Pass List.

Dickenson, George Oswald Morrell, College of Medicine, Newcastle-upon-Tyne.
Garbutt, Richard Henderson, College of Medicine, Newcastle-upon-Tyne.
Harrison, William John, College of Medicine, Newcastle-upon-Tyne.
Holmes, Charles Thomas, College of Medicine, Newcastle-upon-Tyne.
Symes, William Johnston, Sheffield School of Medicine.

The following passed in Elementary Anatomy and Biology :—

Blandford, Laurence James, College of Medicine, Newcastle-upon-Tyne.
Brookes, Clifford Harold, College of Medicine, Newcastle-upon-Tyne.
Cooke, Edleston Harvey, St. Thomas' Hospital.
French, Joseph James, College of Medicine, Newcastle-upon-Tyne.
Hines, Arthur, College of Medicine, Newcastle-upon-Tyne.
Swainston, Eliot, College of Medicine, Newcastle-upon-Tyne.
Watson, Thomas Blandford, College of Medicine, Newcastle-upon-Tyne.

The following passed in Chemistry and Physics :—

Halliday, John Rutherford, London Hospital.
Inman, Ernest, College of Medicine, Newcastle-upon-Tyne.
Lankester, Ralph Albert Rogers, University College, London.
Macfadyen, John, College of Medicine, Newcastle-upon-Tyne.
Moorshead, Robert Fletcher, Bristol Medical School.
Ney, Archibald Cameron, College of Medicine, Newcastle-upon-Tyne.
Picton, Guy Brougham, College of Medicine, Newcastle-upon-Tyne.
Sidgwick, John Ernest, College of Medicine, Newcastle-upon-Tyne.
Weir, David Henderson, College of Medicine, Newcastle-upon-Tyne.

The following passed in Physics :—

Walker, Allan Mackie Garnock, College of Medicine, Newcastle-upon-Tyne.

The following passed in Elementary Anatomy, Chemistry, and Physics :—

Vincent, Ralph Harry, St. Bartholomew's Hospital.

EXAMINATION PAPERS FOR THE DEGREES.

FIRST EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.

APRIL, 1895.

Elementary Anatomy.

Professor HOWDEN, *Examiner.*

1.—Describe the articulations of the Occipital bone, and give a short account of the manner in which the bone is developed.

2.—Name the muscles which take *origin* from, or are *inserted* into, the Sternum, defining the exact position of their attachments to this bone.

3.—What do you mean by the terms *inversion* and *eversion* as applied to the foot? At what joints do these movements take place, and by what muscles are the movements produced? Describe the *origin* and *insertion* of *one* invertor, and *one* evertor muscle.

4.—Name the muscles which are *inserted* into the bones of the forearm. Indicate the precise insertion of each muscle, and state its action.

(All these questions must be answered.)

Elementary Physiology.

Mr. G. E. WILLIAMSON, *Examiner.*

1.—Give examples from the body of man of the various kinds of levers, and explain them.

2.—What is the effect of Respiration on the Circulation of the Blood?

3.—Describe and explain the digestion of milk.

4.—What are the functions of the Liver?

(All these questions must be answered.)

Chemistry with Chemical Physics.

Professors Bedson and Stroud, *Examiners.*

Section I.

1.—Explain in words and by equations the chemical changes taking place in the following:—(*a*) When hydrochloric acid reacts on barium peroxide; (*b*) ammonia on mercurous chloride; (*c*) quick lime on ammonium chloride; (*d*) hydrochloric acid on manganese dioxide; (*e*) carbon dioxide on soda crystals.

2.—How can you determine the composition of the gas produced by the action of hot concentrated sulphuric acid on metallic copper?

3.—Enunciate the law of multiple proportions. Give two examples of this law, and an account of the hypothesis advanced to explain it.

Section II.

4.—Give the formula and characteristics of the compound produced by the action of chlorine on absolute alcohol.

5.—A white solid is given you, how would you ascertain whether it be an organic or an inorganic substance? If the body be organic, how would you proceed to test the nitrogen in it?

6.—Explain the meaning of the following terms, giving examples:—(*a*) Isomeride; (*b*) Homologous series; (*c*) Ether; (*d*) Alcohol; (*e*) Amide.

Section III.

7.—Describe the ordinary clinical thermometer, and explain how you would test the accuracy of its readings.

8.—Describe the Grove cell. In an experiment, six Grove's cells are joined "in series," *i.e.*, the zinc of the one is connected to the platinum of the next and so on, the end zinc and the end platinum are joined by a resistance of 1 ohm. Determine the current strength in ampères. The E.M.F. of each cell = 2 volts; the internal resistance of each cell = ·25 ohm.

9.—Describe some simple form of spectroscope, and explain its use from a physiological point of view.

(Six questions only to be answered, two to be taken from each section.)

Botany with Medical Botany.

Dr. James Murphy, *Examiner.*

1.—Define Aestivation, and describe its various forms.

2.—Define the terms *Ochrea*, *Ligule*, *Parenchyma*, *Phyllode*, and *Scape.*

3.—In what way are new cells formed?

4.—Name the medicinal plants in the natural order Leguminosæ.

5.—What is a flower?

6.—Name the carnivorous plants.

SEPTEMBER, 1895.

Elementary Anatomy.

Professor HOWDEN, *Examiner.*

1.—Describe the articulations of the Frontal bone.

2.—Describe the Scaphoid bone of the foot, and give its articulations.

3.—What are the distinguishing characters of the first and second ribs?

4.—Describe the origin and insertion of the following muscles:—Pectoralis minor; Pronator radii teres; Sartorius; Peroneus longus.

(All these questions must be answered.)

Elementary Physiology.

Professor OLIVER, *Examiner.*

1.—What are the sources, the physico-chemical characters, and uses of Saliva?

2.—Describe the structure of the diaphragm, and state the various circumstances under which it is brought into operation.

3.—What is the difference between (*a*) the blood of the renal artery and renal vein, and (*b*) between the blood of the splenic artery and splenic vein?

4.—At what part of the cardiac cycle is the first sound of the heart heard, and what are its causes?

(All these questions must be answered.)

Chemistry with Chemical Physics.

Professors BEDSON and STROUD, *Examiners.*

SECTION I.

1.—State briefly the chief characteristics of a "physical change" and of a "chemical change." Describe the experiments you would make to illustrate these characters.

2.—What weights of the several materials are needed to prepare enough ammonia to combine with 336 litres of hydrogen chloride, measured at normals?

N = 14. Cl = 35·5. Ca = 40. O = 16.

3.—Explain in words and by equations the reactions employed in the preparation of the following substances:—(*a*) Nitric oxide, (*b*) potassium chlorate, (*c*) carbon monoxide, (*d*) sulphur dioxide, (*e*) ferric chloride.

SECTION II.

4.—What is the formula of acetic acid? Describe the preparation and properties of this acid, and explain how you would distinguish between an acetate and a formate.

5.—How is glycerol prepared? Why is it regarded as containing hydroxyl groups? What is the action of oxalic acid on glycerol?

6.—Explain the meaning of the following terms, giving examples:—(*a*) Hydrocarbon, (*b*) alcohol, (*c*) ethereal salt, (*d*) amine, (*e*) aldehyde.

SECTION III.

7.—A specific gravity bottle is filled with mercury, and contains at 15° C. 50 grams of mercury. When the temperature is raised to 100° C., and the bottle cooled, it contains 49·350 grams. Calculate the coefficient of apparent expansion of mercury.

8.—State the laws of the reflection of light, and explain the formation of an image by reflection from a plane mirror. Determine the nature and position of this image.

9.—Describe the electrophorus, and explain its action. State how your statements can be verified by experiment.

(Six questions only to be answered, two to be taken from each section.)

Botany with Medical Botany.

JAMES MURPHY, M.A., M.D., *Examiner.*

1.—What is a flower?

2.—Describe the flower of Atropa Belladonna.

3.—What is the character of the natural order *Cruciferæ?*

4.—Describe the fruit of the Pine-apple.

5.—What are the medical plants in the natural order *Scrophulariaceæ?*

6.—What is *Parenchyma?*

FIRST EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.

(New Regulations.)

April, 1895.

Elementary Anatomy.

Professor Howden, *Examiner.*

1.—Describe the articulations of the Occipital bone, and give a short account of the manner in which the bone is developed.

2.—Name the muscles which take *origin* from, or are *inserted* into, the Sternum, defining the exact position of their attachments to this bone.

3.—What do you mean by the terms *inversion* and *eversion* as applied to the foot? At what joints do these movements take place, and by what muscles are the movements produced? Describe the *origin* and *insertion* of *one* invertor, and *one* evertor muscle.

4.—Name the muscles which are *inserted* into the bones of the forearm. Indicate the precise insertion of each muscle, and state its action.

(All these questions must be answered.)

Elementary Biology.

Professor Potter, *Examiner.*

1.—Describe the structure of a mature seed. Explain why seeds are useful as articles of food.

2.—Give an account of the manufacture of starch in a green leaf.

3.—Describe fully the structure and Life-history of *Hydra* and *Vorticella.*

4.—Describe the process of respiration in Aquatic and Terrestrial animals.

Illustrate your answer by reference to *Lumbricus*, *Scyllium*, and *Rana.*

5.—What are the characteristics which distinguish Vertebrate and Invertebrate Animals?

Compare the nervous systems of *Astacus* and *Amphioxus.*

6.—Describe the structure of a mature ovum and spermatozid.

Give an account of the first divisions of the fertilised ovum of a Frog, and trace the development as far as the formation of the Alimentary Canal.

(All these questions must be answered.)

Illustrate your answers, as far as possible, with diagrams.

Chemistry.

Professor BEDSON, *Examiner.*

1.—Explain in words and by equations the chemical changes taking place in the following :—(*a*) When hydrochloric acid acts on barium peroxide ; (*b*) ammonia on mercurous chloride ; (*d*) hydrochloric acid on manganese dioxide ; (*e*) carbon dioxide on soda crystals.

2.—How can you determine the composition of the gas produced by the action of hot concentrated sulphuric acid on copper ?

3.—Enunciate the law of multiple proportions. Give two examples of this law, and an account of the hypothesis advanced to explain it.

4.—Give the formula and characteristics of the compound produced by the action of chlorine on absolute alcohol.

5.—A white solid is given you, how would you ascertain whether it be an organic or an inorganic substance ? If the body be organic, how would you proceed to test for nitrogen in it ?

6.—Explain the meaning of the following terms, giving examples :—

(*a*) Isomeride ; (*b*) Homologous series ; (*c*) Ether ; (*d*) Alcohol ;

(*e*) Amide.

(All these questions must be answered.)

Physics.

Professor STROUD, *Examiner.*

1.—Describe some simple instrument for measuring the pressure of the atmosphere, and explain the principle of its action.

2.—Define the term "boiling point." Does the boiling point of a liquid depend upon the atmospheric pressure ? By what experiments would you determine whether the boiling point of a liquid depends upon the atmospheric pressure ?

3.—Explain the meaning of the term "latent heat." Calculate the latent heat of steam at 100° C. from the following data:—17 grams of steam at 100° C. are passed into 495 grams of water contained in a calorimeter. The initial temperature of the water in the calorimeter is 15·2° C.; the final temperature is 35·4° C.

4.—Describe some simple form of galvanometer that can be used for measuring the strength of an electric current. State the relation between the E.M.F. in an electric circuit, the resistance of the circuit, and the strength of the electric current through the circuit.

5.—Describe how to make a horse-shoe electro-magnet, such, *e.g.*, as is used in an electric bell.

6.—Discuss the use of lenses for correcting the defects of vision known as "long sight," "short sight."

SEPTEMBER, 1895.

Elementary Anatomy.

Professor HOWDEN, *Examiner.*

1.—Describe the articulations of the Frontal bone.

2.—Describe the Scaphoid bone of the foot and give its articulations.

3.—What are the distinguishing characters of the first and second ribs?

4.—Describe the origin and insertion of the following muscles:—Pectoralis minor; Pronator radii teres; Sartorius; Peroneus longus.

(All these questions must be answered.)

Elementary Biology.

Professor POTTER, *Examiner.*

1.—Explain the differences in nutrition between an Alga (*Spirogyra*) and a Fungus (*Mucor*).

2.—What is meant by the expression, "alternation of generations?" Illustrate your answer by a consideration of the Life-history of a Fern.

3.—Give an account of the structure of a *Hydra.* Explain its methods of reproduction.

4.—In a Dog-fish, what structures would be cut by a transverse section passing through the centre of the pancreas? Compare this with a transverse section of a Worm at about the 60th segment.

5.—Describe the structure and mode of life of an *Amœba.* Deduce from these the fundamental properties of living protoplasm.

6.—Describe fully the mechanism of the heart of a Rabbit, explaining the construction and action of the various valves.

(All these questions must be answered.)

Chemistry.

Professor BEDSON, *Examiner.*

1.—State briefly the chief characteristics of a "physical change" and of a "chemical change." Describe the experiments you would make to illustrate these characters.

2.—What weights of the several materials would be required to prepare enough Ammonia to combine with 336 litres of Hydrogen Chloride, measured at normals?
N = 14. Cl = 35·5. Ca = 40. O = 16.

3.—Explain in words and by equations the reactions employed in the preparation of the following substances:—(*a*) Nitric oxide, (*b*) potassium chlorate, (*c*) carbon monoxide, (*d*) sulphur dioxide, (*e*) ferric chloride.

4.—What is the formula of acetic acid? Describe the preparation and properties of this acid, and explain how you would distinguish between an acetate and a formate.

5.—How is glycerol prepared? Why is it regarded as containing hydroxyl groups? What is the action of oxalic acid upon glycerol?

6.—Explain the meaning of the following terms, giving examples of each:—(*a*) Hydrocarbon, (*b*) alcohol, (*c*) ethereal salt, (*d*) amine, (*e*) aldehyde.

(All these questions must be answered.)

Physics.

Professor STROUD, *Examiner.*

1.—State Boyle's Law, and explain how it can be experimentally verified.

It is found that the volume of a certain mass of gas is represented by 14, when the pressure is greater than that of the atmosphere by an amount represented by 6·5 inches of mercury. Again, the volume of the same mass of gas, at the same temperature, is represented by 21, when the pressure is less than that of the atmosphere, by an amount represented by 6 inches of mercury. Determine the pressure of the atmosphere at the time of the experiment.

2.—Describe the "hypsometer" used for determining and testing the boiling points of thermometers. Explain carefully how the error, if any, of the boiling point of a thermometer is determined.

3.—Explain clearly the meaning of the term "latent heat."

How many grams of steam must be passed into a vessel containing 250 grams of water and 150 grams of ice, in order to melt all the ice, and raise the temperature of the whole to 30° C.

(Latent heat of fusion of ice = 80 units.
,, ,, steam = 537 units.)

4.—Explain the term "magnetic dip or inclination," and describe how the value of the dip at a certain place can be determined. Give a general idea of the value of the dip for different positions on the earth's surface.

5.—An electric current is passed through a vertical coil of wire placed in the magnetic meridian. A small compass needle is placed in the centre of the coil. Describe the effect on the needle as the current is gradually increased from zero. Is the deflection proportional to the strength of the current?

6.—Define the term "index of refraction." A scratch on the surface of a thick plate of glass is viewed from the opposite side. Draw a figure showing the course of the light from the scratch to the eye of the observer. (Index of refraction of glass = 1·5.)

(All these questions must be answered.)

SECOND EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.

April, 1895.

Anatomy.

Professors Howden and A. Thomson, *Examiners.*

1.—Describe, step by step, the dissection that is required in the removal of the Brain, and compare the arrangement of the Dura Mater in the cranium with its arrangement in the spinal canal. A description of the cranial blood sinuses is not expected.

2.—The abdomen having been opened, describe the dissection necessary to expose the trunk of the Portal Vein. Give an account of the origin, course, and relations of the vein, and name the tributaries which it receives, stating whether they open *directly* or *indirectly* into it.

3.—Describe the course and relations of the external Plantar Nerve, and give the distribution of its various branches.

4.—Describe the external Pterygoid Muscle. Give its relations and nerve supply, and state its action.

5.—Describe the radio-ulnar articulations, and explain the movements which occur at these joints.

6.—Describe in detail the blood supply of the anterior abdominal wall.

(Four questions only to be answered, of which two are to be taken from the first half of the paper, and two from the second half.)

Physiology.

Professor OLIVER and Mr. D'ARCY POWER, *Examiners.*

1.—What is the structure of a Tendon? Describe in detail a method for demonstrating its minute histological appearances.

2.—Criticise the following sentence from a physiological standpoint:—"The arteries are not inert pipes, but are essentially muscular tubes, which are played upon and excited to contract or dilate by vaso-motor nerves." Adduce evidence in favour of the correctness of this statement.

3.—What are the uses of fat in the body? Under what conditions, and by what means is it stored up?

4.—What is lymphoid tissue? Where is it found in the human body, and what are its functions?

5.—What are the supposed antecedents of urea, uric acid, and hippuric acid, and where are they formed?

6.—What is the histological composition of the crossed pyramidal tracts in the spinal cord, and what is their function? How is their nutrition secured, and in what direction do they degenerate?

(Four questions only to be answered, of which two are to be taken from the first half of the paper, and two from the second half.)

Materia Medica with Pharmacy.

Dr. S. McBEAN, *Examiner.*

1.—Name official preparations of Belladonna. Describe the method of preparing the extract. Describe the action of Belladonna upon heart and respiration.

2.—How is Sulphuric Acid prepared? What impurities may be present, and how would you detect them?

3.—Name four official preparations of Iron, and describe the preparation of Liq. Ferri Perchloridi. What is the action of Iron upon the blood?

4.—Name the official plants in Nat. Ord. Leguminosæ, giving the preparations of Acacia Catechu, and the composition and dose of Compound Catechu Powder.

5.—How is the Extract (green) of Hyoscyamus prepared? Give the dose and uses of Hyoscyamus in medicine.

6.—How is Iodine obtained, and what are its physical characters? How is the Iodide of Potassium prepared? Give the dose and therapeutic uses.

(Four questions must be answered, and not more than four.)

SEPTEMBER, 1895.

Anatomy.

Professors HOWDEN and A. THOMSON, *Examiners.*

1.—Describe the dissection necessary to expose the Submaxillary Gland. Give an account of its relations, and trace the course of its duct. From what sources does the Gland receive its vascular and nervous supply?

2.—Describe the Rectus Abdominis Muscle, and indicate the formation of its sheath. What are the relations of the muscle to the other contents of the sheath?

3.—Describe the dissection necessary to expose the Anterior Interosseous Artery on the front of the forearm. Give an account of its branches and their anastomoses.

4.—Describe the course and distribution of the branches of the External Popliteal Nerve.

5.—What arteries are found in the region of the Buttock? State from what sources they are derived, enumerate their branches, and describe their course and relations within this region.

6.—Write a description of the Eustachian Tube.

(Four questions only to be answered, of which two are to be taken from the first half of the paper, and two from the second half.)

Physiology.

Mr. G. E. WILLIAMSON and Mr. D'ARCY POWER, *Examiners.*

1.—Give an account of the motor areas of the surface of the Brain; their position, functions, and the manner in which these functions have been determined.

2.—Describe and compare the process of secretion in the salivary glands, in the pancreas, in the breast, in sebaceous and in sweat glands, including the changes that may be observed with a microscope.

3.—What gases are present in venous and in arterial blood; in what quantities and how are they associated or combined? What occurs when arterial blood is exposed to a vacuum? What occurs when it is shaken up with carbonic oxide, with nitric oxide, and with sulphuretted hydrogen, respectively?

4.—Describe the histological appearances of a vertical section through the skin of the heel as they are seen under a low power of the microscope. What are the chief physiological constituents of the skin, and how can they be recognised chemically?

5.—Describe the mechanism of Accommodation. Upon what experimental evidence is our knowledge based?

6.—Discuss the causes of the sounds accompanying (*a*) the normal heart beat and (*b*) the respiration.

(Four questions only to be answered, of which two are to be taken from the first half of the paper, and two from the second half.)

Materia Medica with Pharmacy.

Dr. McBean, *Examiner.*

1.—Describe the preparation of Dilute Nitro-hydrochloric Acid. What are its uses in medicine?

2.—Give characters and tests also uses of Lithium Carbonate.

3.—What is the source of Phosphorus, and how is it obtained?

Name official compounds, and describe its action upon bone; also the action of Sulphate of Copper as an antidote in Phosphorous Poisoning.

4.—How is Amyl Nitrite prepared? What are its characters, probable impurities, and tests, more especially the physiological test? Describe physiological action when inhaled, and its use in medicine.

5.—Name active principles or alkaloids of Aconite, Opium, Hyoscyamus Digitalis, Senna, Castor Oil, Rhubarb, Jaborandi, Belladonna, and Ipecacuanha, and give physiological action of any one of above alkaloids.

6.—Enumerate the morbid conditions in which Liq. Ferri Perchloridi would be of considerable value.

(Four questions must be answered, and not more than four.)

FINAL EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.

April, 1895.

Principles and Practice of Medicine.

Professor Philipson and Dr. William Ewart, *Examiners.*

1.—Sketch the clinical features, the diagnosis, and the treatment of a case of Acute Biliary Colic. State fully the indications for the subsequent treatment of the chronic biliary affection. Write prescriptions for the acute as well as for the chronic condition.

2.—Point out the differences between the early and the late Hæmoptysis of phthisis, with special regard to their mode of production and to their prognosis. State clearly the principles which should guide the general and medicinal treatment of severe hæmorrhage from the lungs, giving the doses of any remedies suggested.

3.—Enumerate and briefly describe the various affections of the brain and of its membranes to which syphilis may give rise; and mention, in each case, the prospect of recovery under appropriate treatment.

4.—Describe the symptoms of Tubercular Meningitis in children, and give the differential diagnosis of the condition from Enteric Fever. Give the treatment of the condition, medicinal and hygienic.

5.—Review the causation of Pyelitis, and give the symptoms, diagnosis, and treatment of the condition.

6.—Give a definition of Lupus. Mention the forms that may occur, and describe their appearances and treatment, local and constitutional.

Principles and Practice of Surgery.

Dr. Frederick Page and Mr. John Bland Sutton, *Examiners.*

1.—Describe a case of acute Osteomyelitis, giving the pathology of the disease, and the treatment you would adopt.

2.—Describe the operation of venesection at the bend of the elbow, mentioning the structures which are cut, and the possible accidents which may occur in performing the operation.

3.—What circumstances would induce you to express the opinion that a certain ulcer on the tongue was malignant?

4.—Give the relations of the trachea.

5.—Give the signs of fracture of the neck of the femur. What treatment would you adopt? Mention the complications likely to arise in the course of the case which are sources of danger to life.

6.—Enumerate the causes of acute Epididymitis, and give the principles concerned in the treatment of this disease.

Medical Jurisprudence and Public Health.

Dr. MURPHY and Dr. H. E. ARMSTRONG, *Examiners.*

1.—Explain the difference between the terms "common witness" and "skilled witness."

2.—How may the validity of a will be affected by the bodily disease of a testator?

3.—Describe a fatal case of poisoning by oxalic acid.

4.—Describe a typical case of acute Melancholia.

5.—Name the signs of wholesomeness and potability of Water. Indicate the ordinary forms of pollution of water, and the means of detecting them.

6.—What diseases are spread through the medium of Cow's Milk, and by what circumstances should your suspicion as to the probability of such spread be aroused?

Midwifery and Diseases of Women and Children, and Pathology.

Dr. NESHAM and Dr. DRUMMOND, *Examiners.*

1.—Describe the ordinary mechanism of delivery in Presentation of the Head in the third position (O.D.P.). What causes may prevent the forward rotation of the occiput during labour? and how would you manage a case thus retarded?

2.—What causes may produce rigidity of the Os and Cervix Uteri in the first stage of Labour? What treatment, local and constitutional, would you adopt to overcome this difficulty?

3.—What are the symptoms and signs of Accidental Hæmorrhage in the seventh month of Pregnancy? What causes tend to produce it, and how would you treat such a case?

4.—Give the symptoms, signs, diagnosis, and treatment of Retroflexion of the Unimpregnated Uterus.

5.—State how you would recognise, in the *post-mortem* room, the following pathological conditions:—Leukæmic Kidney, Tubercular Meningitis, Septic Gangrene of the Lung, Syphilitic Cirrhosis of the Liver.

6.—Give a brief description of the joints in Arthritis deformans.

7.—Compare the blood in the following morbid states:—Anæmia from malignant disease, Pernicious (Addison's) Anæmia, Leukæmia, Chlorosis.

8.—Describe the microscopical appearances of a Lung in Lobular Pneumonia.

SEPTEMBER, 1895.

Principles and Practice of Medicine.

Professor PHILIPSON and Dr. WILLIAM EWART, *Examiners.*

1.—Describe the causation, symptoms, and course of Hooping Cough. Mention the complications that may arise, and their signification. Give the treatment of Hooping Cough.

2.—Classify the causes of intestinal obstruction, differentiate the conditions mentioned, as to their symptoms, prognosis, and treament.

3.—How is Pemphigus characterised? Mention the diseases with which Pemphigus may be confounded, and give their distinguishing characters.

4.—Review the etiology of Dilatation of the Stomach occurring at various ages, its clinical symptoms, and its diagnostic physical signs. Indicate the treatment suitable to each variety.

5.—Describe the morbid changes occurring within the heart in cases of Ulcerative Endocarditis. Give an account of the symptoms and physical signs, with special reference to diagnosis, and of the various complications to which the disease may give rise.

6.—Give the characteristic symptoms and physical signs, the prognosis, and the treatment of Bronchiectasis.

(N.B.—Every question must be answered.)

Principles and Practice of Surgery.

Dr. FREDERICK PAGE and Mr. JOHN BLAND SUTTON, *Examiners.*

1.—Describe fully the operation for radical cure of umbilical hernia.

2.—Give the history of a fracture of the patella, due to muscular action. Describe the fracture, mention the treatment you would adopt, your reasons for selecting the method of treatment you would adopt, and the result you would expect to obtain.

3.—Traumatic rupture of the urethra. How would you know that this accident had happened? How would you treat a case of traumatic rupture of the urethra? With what objects would you so treat the case, and what result would you expect as the outcome of the case?

4.—Describe the operation of Castration. In what diseases of the testicle is it required?

5.—Give an account of Potts' fracture, including its treatment.

6.—What is a syphilitic gumma? Describe the clinical signs of a gumma on the frontal bone, and the appropriate treatment.

(N.B.—Every question must be answered.)

Medical Jurisprudence and Public Health.

Dr. MURPHY and Dr. H. E. ARMSTRONG, *Examiners.*

1.—In examining the body of a recently-born child, how is the hydrostatic lung test performed, and what are the objections to its use?

2.—How are the civil rights of an individual affected if he becomes insane?

3.—What are the indications for treatment in a case of poisoning, and how would you treat a case of acute poisoning from strychnine?

4.—What are the signs of recent delivery in the dead?

5.—Describe the Cysticercus Cellulosæ, and give its life-history.

6.—What diseases are due to defective drainage? Show, as clearly as possible, how each of the defects in question respectively operates.

Midwifery and Diseases of Women and Children, and Pathology.

Dr. NESHAM and Dr. DRUMMOND, *Examiners.*

1.—What are the conditions which favour Hæmatic effusion into the cellular tissue of the Vulva or Vagina during Labour? At what time does the effusion generally take place; and what are the symptoms and signs of its occurrence?

How would you treat a case thus complicated, both during and after delivery?

2.—What causes may produce Retro-version of the Gravid Uterus during the first three months of Pregnancy? What are the symptoms and signs of this displacement, and what treatment would you adopt in this case?

3. Give the differential diagnosis of Head, Face, Breech, and Shoulder presentations in the first stage of Labour at full term.

4.—How would you diagnose and treat a case of Occipito-Posterior presentation of the Head in Labour, where forward rotation of the occiput does not take place naturally?

5.—Discuss the pathology of secondary spinal degenerations.

6.—Explain Cardiac Hypertrophy in the following morbid states:—

a Aortic Regurgitation.
b Mitral Regurgitation.
c Chronic Bright's Disease.

7.—Discuss the pathology of Hæmorrhoids.

8.—Give a short account of the changes (naked-eye and microscopical) that occur in Fibroid Phthisis.

(N.B.—Every question must be answered.)

EXAMINATION FOR THE DEGREE OF MASTER IN SURGERY.

APRIL, 1895.

Principles and Practice of Surgery.

Dr. FREDERICK PAGE and Mr. JOHN BLAND SUTTON, *Examiners.*

1.—Write a full description of Mickulicz's osteoplastic resection of the foot.

2.—A young man is unable to use his leg, and suffers much pain, in consequence of old dorsal dislocation of the head of the femur, which has not yielded to efforts at reduction. Describe the operative procedures available for his relief, and say which you would recommend.

3.—A man, upwards of 70 years of age, has great urinary trouble, due to enlaged prostate, the catheter causes pain and bleeding. What treatment would you recommend? Why would you recommend it, and what results would you expect from the adoption of your recommendation?

4.—Give the treatment of a case of cut-throat, with division of the trachea. What complications may arise, and how would you endeavour to anticipate them?

5.—Give the signs and treatment of rupture of the male urethra.

6.—Give an account of the affection of the joints, known as Charcot's disease, as it may be studied clinically in the knee.

Surgical Anatomy and Surgical Pathology.

Dr. Frederick Page and Mr. John Bland Sutton, *Examiners.*

1.—Give the relations of the Ureter in the female, and make a list of the operations in which it may be endangered.

2.—What species of tumour may arise primarily in the eyeball? Describe in detail the microscopical characters of melanomata of the uveal tract.

3.—Give an account of the anatomy of an echinococcus colony (hydatid cyst) as seen in the liver, and compare it with an echinococcus colony in the shaft of a long bone.

4.—Give the relations of the common Carotid Artery at the point which you would select to place a ligature round it.

5.—What is an Odontome?

6.—What do you understand by Sequestration Dermoids? What are the commonest sites in which they are found, and how do you account for their occurrence there?

EXAMINATION FOR THE DEGREE OF DOCTOR IN MEDICINE FOR PRACTITIONERS OF FIFTEEN YEARS' STANDING.

April, 1895.

Medicine and Allied Sciences.

Professor Philipson and Dr. William Ewart, *Examiners.*

1.—Describe the clinical history and symptoms of a case of simple Acute Pericarditis, and the physical signs corresponding to its different stages. Discuss the prognosis and the treatment of each of the clinical varieties of Acute Pericarditis.

2.—In a case of Apoplexy, give the chief points on which reliance may be placed, as to whether the case is one of sanguineous effusion, or softening from arterial obstruction. Give the treatment of the two conditions.

3.—What is meant by Functional Albuminuria? Mention the different forms that may occur, and review their import and treatment.

4.—Enumerate the structures, from above downwards, that lie behind the median vertical abdominal line.

5.—Give the characteristic features of Acute Mania, and state how the course of Acute Mania varies in different cases. Describe the treatment of the condition.

Surgery and the Allied Sciences.

Dr. Frederick Page, Dr. H. E. Armstrong, and Mr. John Bland Sutton, *Examiners.*

1.—Give the signs of a strangulated femoral hernia in a female. With what conditions may it be confounded? Also give a list of the viscera which have at various times been found in the sac.

2.—Enumerate the structures which would be divided in a circular amputation of the arm three inches above the elbow.

3.—A patient is bleeding freely from a punctured wound in the palm of the hand. What steps would you take to control and prevent the hæmorrhage?

4.—State the duration of (*a*) the incubatory, (*b*) the prodromal, (*c*) the febrile, and (*d*) the infective, stages in each of the following diseases, viz.:—Smallpox, Measles, Scarlet Fever, Diphtheria, Enteric Fever, Typhus, Yellow Fever, Cholera.

Midwifery, Medical Jurisprudence, and Pathology.

Dr. Nesham, Dr. Murphy, and Dr. Drummond, *Examiners.*

1.—Give the differential diagnosis of Presentation of the Shoulder, the Elbow, the Hand. Enumerate the different methods of version, but do not describe them.

2.—What are the symptoms of Puerperal Septicæmia coming on during the third day after delivery? What treatment would you adopt in such a case?

3.—Under what circumstances will a declaration of a dying person be admitted in evidence?

4.—How may burns received before death be distinguished from those received after death?

5.—State the causes of Cirrhosis of the Liver, and give a short account of the microscopical changes in the most common variety of Cirrhosis.

6.—Explain the meaning of the following terms as applied to Aneurysmal Disease:—True; false; sacculated; fusiform; cirsoid; varicose aneurysm; aneurysmal varix; dissecting aneurysm.

SEPTEMBER, 1895.

Medicine and Allied Sciences.

Professor PHILIPSON and Dr. WILLIAM EWART, *Examiners.*

1.—Discuss the causation of obstruction of the Cerebral Arteries. Describe the symptoms, prognosis, and treatment of the condition.

2.—Classify the causes of Ascites. Give the chief and diagnostic symptoms of the conditions enumerated, also their prognosis and treatment.

3.—Give the position of the Pancreas to the Umbilicus, and describe the relative Anatomy of the Pancreas.

4.—Give the characteristic symptoms of Adolescent Insanity, and the indications that complete recovery has been established.

5.—Give a complete account of the clinical events, symptoms, and physical signs in a fatal case of Acute Bronchitis in the adult, and of the treatment adapted to its various stages.

Surgery and the Allied Sciences.

Dr. FREDERICK PAGE, Dr. H. E. ARMSTRONG, and Mr. JOHN BLAND SUTTON, *Examiners.*

1.—Describe a case of strangulated femoral hernia, and the operation you would perform.

2.—Describe a case of dorsal dislocation of the head of the femur, and the method you would adopt for its reduction.

3.—Give an account of the signs, differential diagnosis, and treatment of Hydrocele of the tunica vaginalis testis.

4.—What are the causes of the spread of Tubercular Phthisis? Describe in detail the measures you would recommend to be taken for the prevention of the disease.

5.—Name the parasitic diseases of man due to the consumption of Pork, and describe the organisms infesting the flesh of the pig.

(Questions 1, 2, and 3 *must* be answered, also one of the two questions numbered 4 and 5.)

Midwifery, Medical Jurisprudence, and Pathology.

Dr. NESHAM, Dr. MURPHY, and Dr. DRUMMOND, *Examiners.*

1.—What conditions may necessitate the induction of Premature Labour after the seventh month of Utero-Gestation? Describe the method you think best for its induction.

2.—What are the causes of Subinvolution of the Uterus?

What symptoms and signs does this complication give rise to, and how would you treat it?

3.—What are the causes of sterility in the female?

4.—What is Reinsch's process for the detection of arsenic, and what are objections to its use?

5.—Enumerate the chief situations in the body in which Dermoids are found.

6.—Discuss briefly the Morbid Anatomy of Enteric Fever.

EXAMINATION FOR THE DEGREE OF BACHELOR IN HYGIENE, AND FOR THE DIPLOMA IN PUBLIC HEALTH (D.P.H.).

APRIL, 1895.

Sanitary Legislation, Nosology, and Sanitary Medicine.

Professor PHILIPSON and Dr. H. E. ARMSTRONG, *Examiners.*

1.—Give an outline of the Sanitary Provisions of the Public Health Acts Amendment Act, 1890.

2.—Fill in the diseases and other causes of death in Great Britain, in the following Nosological Table:—

i.—*Specific, Febrile, or Zymotic Diseases*, viz.:—(1) Miasmatic, (2) Diarrhœal, (3) Venereal, (4) Septic.

ii.—*Parasitic Diseases.*
iii.—*Dietic Diseases.*
iv.—*Constitutional Diseases.*
v.—*Developmental Diseases.*
vi.—Local Diseases in the following systems, viz.:—(1) Nervous, (2) Circulatory, (3) Respiratory, (4) Digestive. (5) Urinary, (6) Reproductive.

Indicate other causes of death not provided for in the above table.

3.—Name the diseases with which Smallpox and Typhus respectively may be confused, indicating the signs leading to error, and those by which a correct diagnosis is to be made in each case.

4.—Describe the origin and mode of Spread of Woolsorters' Disease, and the measures to be taken for its prevention.

5.—What is the meaning of the term Specific Infectious Diseases? How are these diseases characterised?

6.—Enumerate the diseases with which Enteric Fever may be confounded, and give the differential diagnosis of the conditions mentioned.

Comparative Pathology.

Professor MURRAY, *Examiner.*

1.—Describe the structure of the *Trichina Spiralis.* Give the life-history of this parasite, and point out how man may become infected by it.

2.—Describe fully how you would obtain and make a bacteriological examination of a piece of membrane from the throat of a person who is suspected to be suffering from Diphtheria. What results would lead you to conclude that the case was one of true Diphtheria?

3.—Give the characters of the *Plasmodium Malariæ.* How would you demonstrate its presence in the blood of a man suffering from malarial fever.

4.—Give an account of how you would examine a filter, so as to test its efficiency in removing bacteria from the water passing through it.

5.—Describe the Bacillus of Tetanus. How would you stain it to show the spore most clearly? Where are the bacilli most frequently found, and what conditions favour their growth in the body?

6.—How would you examine a sample of milk for tubercle bacilli?

Sanitary Chemistry and Physics.

Professors BEDSON and STROUD, *Examiners.*

1.—Describe and explain how you would prepare a solution of Potassium Permanganate, of such a strength that 1 c.c. is equivalent to 1 mgrm. of oxygen.

K = 39·1, Mn = 55, O = 16, Fe = 56.

2.—In what forms may nitrogen occur in a polluted well-water?

3.—How would you recognise the presence of each of the following gases when mixed with air :—(*a*) Sulphur dioxide ; (*b*) carbon monoxide ; (*c*) sulphuretted hydrogen ; (*d*) hydrochloric acid gas.

4.—What is meant by the "height of the barometer?" In a siphon barometer, in which the section of the limb open to the air is twice that of the closed limb, through what distance will the mercury fall in the closed limb when the "height of the barometer" falls one inch?

5.—Explain the relation between the "head" producing circulation of air in a ventilating system and the "flow" of air produced. State the various means available for producing the requisite head.

6.—Define the dew-point. Describe Mason's wet and dry bulb hygrometer, and explain how the dew-point is determined by its means.

Practical Hygiene, Climatology, Meteorology, etc., and Vital Statistics.

Professor PHILIPSON and Dr. H. E. ARMSTRONG, *Examiners.*

1.—Show the different liabilities at various age-periods to sickness and death from the several Zymotic and Respiratory Diseases, also, from Diseases of the Circulatory and Nervous Systems.

2.—Describe two systems of Ventilation and Warming applicable for Board Schools, and other public institutions.

3.—Describe the "Old Dutch" Process of White Lead Making, showing the dangers to the health of the workers, the protective regulations in force and any other measures you would adopt for preventing lead poisoning in this manufacture.

4.—Name the different sources and causes of Plumbism other than the Manufacture of White Lead, as affecting (*a*) workpeople, and (*b*) other persons.

5.—Discuss the question of the aërial convection of Small-pox from Hospitals.

6.—Give the Registrar-General's classification of communicable diseases.

SEPTEMBER, 1895.

Sanitary Legislation, Nosology, and Sanitary Medicine.

Professor PHILIPSON and Dr. H. E. ARMSTRONG, *Examiners.*

1.—Describe the provisions of the Housing of the Working Classes Act, 1890.

2.—Give a list of the diseases due to (1) Dietic error, (2) Atmospheric impurity, (3) Attitude, (4) Over-exertion (general or local), (5) Specific infection.

3.—What diseases of the eye are due to occupational causes? Name the occupations in question; how they act harmfully, and show how the evil effect in each case may be averted.

4.—Describe the different materials and processes causing injury to health in the Manufacture of Pottery, and show the diseases to which they give rise.

5.—Explain the terms Endemic, Epidemic, and Sporadic, in their application to preventable diseases.

6.—If a patient, suffering from a communicable disease, has to be treated at home, what rules should be observed to prevent the spread of the disease?

Comparative Pathology.

Professor MURRAY, *Examiner.*

1.—Describe the structure and give the life-history of the *Tœnia Echinococcus*, and show how this parasite is transmitted from animals to man.

2.—How may tubercular phthisis be conveyed from one person to another? What precautions can be taken to prevent the dissemination of tubercle bacilli by cases of phthisis?

3.—Describe how you could ascertain by experiment whether a dog was suffering from rabies or not. How may an outbreak of this disease be stamped out? Give examples showing the efficiency of the method you advocate.

4.—How would you examine a specimen of blood taken from a case of suspected anthrax for the bacillus of that disease? Describe the different ways in which man may become infected by anthrax.

5.—Give the chief characteristics of the bacillus of glanders. How would you proceed in order to obtain a pure cultivation of this bacillus from the nasal discharge of a horse suffering from the disease?

6.—Describe fully how you would test the efficiency of an antiseptic in destroying pathogenic bacteria.

Sanitary Chemistry and Physics.

Professors Bedson and Stroud, *Examiners.*

1.—Discuss and criticise the several methods which have been proposed to estimate the nitrates and nitrites in a sample of water.

2.—How would you recognise each of the following gases when mixed with air:—(*a*) Carbon monoxide, (*b*) sulphuretted hydrogen, (*c*) hydrochloric acid, (*d*) sulphur dioxide.

3.—Describe the method you would adopt in analysing a sample of milk.

4.—State exactly the method of reading the height of the barometer, and explain how to calculate the pressure of the atmosphere in pounds per square inch, after the height of the barometer has been determined.

5.—Describe the processes by which heat is distributed from the source of heat in a room to the different objects in the room. Discuss the methods by which the loss of heat from a room can be diminished.

6.—Describe some method for determining the illuminating power of a source of light. Distinguish between "the illuminating power of a given source," and "the intensity of illumination at a given point due to a given source."

Vital Statistics, Climatology, Meteorology, etc., and Practical Hygiene.

Professor Philipson and Dr. H. E. Armstrong, *Examiners.*

1.—Discuss the relation between Birth-rate and General Death-rate. Indicate the more prominent factors of the death-rate and those liable to fluctuation, and shew the periods, ætal and seasonal, of their principal incidence.

2.—Draw up, as if for the guidance of architects, a full memorandum of requirements for a Hospital for Infectious Diseases of 200 beds, to be erected on a given site.

3.—As Medical Officer of Health to a Port Sanitary District, what would be your duty and powers in case of the introduction of Cholera by ship, and how would you act?

4.—What steps, from first to last, do you consider necessary to secure a pure and wholesome supply of milk for a town?

5.—Describe the circumstances under which Paludal and Litoral fevers have been observed to become developed.

6.—Show by the laws of climate, that each race of mankind has its prescribed salubrious limits.

CERTIFICATE OF PROFICIENCY IN GENERAL EDUCATION.

March, 1896.

English.

1.—Under what four periods may the historical plays of Shakespeare be classed? to which period does *Richard II.* belong? and how is it distinguished from the other three periods?

2.—Contrast the characters of York and Gaunt.

3.—By whom, to whom, and under what circumstances are the following words spoken:—

(*a*) Desolate, desolate, will I hence and die:
The last leave of thee takes my weeping eye.

(*b*) Live in thy shame, but die not shame with thee!
These words hereafter thy tormentors be.

(*c*) We are amazed; and thus long have we stood
To watch the fearful bending of thy knee.

(*d*) The blood of English shall manure the ground,
And future ages groan for this foul act.

(*e*) And thy abundant goodness shall excuse
This deadly blot in thy digressing son.

4.—Copy out and state the nature of each dependent clause in the following sentences:—

Were he my brother, nay, my kingdom's heir,
As he is but my father's brother's son,
Now, by my sceptre's awe, I make a vow,
Such neighbour nearness to our sacred blood
Should nothing privilege him, nor partialize
The unstooping firmness of my upright soul.

5.—Parse fully the words in italics:—

(*a*) The Duke of Norfolk, sprightfully and *bold*,
Stays but the summons.

(*b*) Chasing the royal blood
With fury from *his* native residence.

(*c*) In war was never lion *raged* more fierce.

(*d*) Nor *near* nor farther off than this weak arm.

(*e*) And they shall strike
Your children yet unborn and unbegot
That lift your vassal hands against my head.

6.—State and illustrate the various uses (1) of the simple infinitive (2) of the gerundial infinitive.

7.—Write an essay *either* on Patriotism *or* on Charity.

Geography.

1.—Explain the following:—Tropic, glacier, longitude, monsoon, archipelago, Savannahs, Tundras.

2.—Give accurately the position of—Durban, Belgrade, Damascus, Seville, Hammerfest, Montreal, Pondicherry, Hyères, Innsbruck, Salerno.

3.—Trace the course of the Amazon from its source to its mouth, marking its chief tributaries.

4.—By map or otherwise locate the "Schomburgk Line." State shortly the disputed points between Great Britain and Venezuela.

5.—Give some account of the Flora and Fauna of South America.

6.—What do you know of the following:—Sebastopol, Trient, Alexandria, Bayonne, Medina, Londonderry, St. Gothard, Stirling, Sydney, Delagoa Bay?

7.—Name the chief Mountain Ranges and Heights in Scotland and Ireland.

8.—The chief Industries of Scotland. State in what localities they are severally carried on.

9.—Name the six Counties of North Wales, and mention not more than two points of interest with regard to each.

Arithmetic.

1.—A number is divided by 11; the quotient multiplied by 57 gives 6,384; what is the number?

2.—Find the combined cost of 789 articles at £1 17s. $11\frac{1}{2}$d. each; 20 tons 17 cwt. 1 qr. 21 lbs. of goods at £5 a ton; and 11 tons of goods at $1\frac{1}{2}$d. a lb.

3.—200 cubic feet of water is removed from a full tank 13 ft. 7 ins. long, 6 ft. 5 ins. wide, and 3 ft. 11 ins. deep; how much water is left in the tank, and what is its depth?

4.—Simplify $\frac{57}{77}$ of $\frac{253}{589}$ of $\frac{403}{221}$ of $\frac{153}{92}$, and $\dfrac{2\frac{3}{4} + \frac{5}{8} \text{ of } (3\frac{1}{3} - \frac{5}{6})}{4\frac{1}{2} \div 5\frac{2}{5} - \frac{1}{15}}$.

5.—Find the value of $\cdot375$ of a guinea + $\cdot\dot{5}\dot{4}$ of 8s. 3d. + $\cdot0\dot{2}\dot{7}$ of £2 15s.

6.—If 3 men can make 20 knives in 2 days, how long will it take 25 men to make 10 cases each containing 50 knives?

7.—What income will a man derive from a capital of £10,000, if he gets $4\frac{1}{2}$ per cent. interest, but has to deduct an annuity of £15 from every £100 of income, and in addition has to pay $\frac{1}{8}$ per cent. for insurance, and $7\frac{3}{4}$ per cent. for taxes?

8.—Find the present worth of £274 13s. 4d., due $9\frac{3}{5}$ months hence, at $3\frac{3}{4}$ per cent.

9.—A man sells goods for £83 14s., and by so doing loses 7 per cent.: what was the cost price of the goods?

10.—A, B, C, have three legacies left them: the first of £5,000 they share in the proportion of 1, 2, 3: the second of £2,000 in the proportion of 5, 3, 2; the third of £3,000 in the proportion of 4, 1, 3; what will each get?

English History.

1.—An account of the causes and results of the Gunpowder Plot.

2.—Relate shortly the growth of Parliamentary power in the reign of James I.

3.—A life of Archbishop Laud.

4.—Name, with dates and results, the chief battles of the Civil War.

5.—A brief statement of Cromwell's foreign policy.

6.—A short account of the relations between Charles II. and Parliament.

7.—What do you know of the Duke of Monmouth's Rebellion?

8.—Write brief notes on:—The English Bible, Ship Money, Star Chamber, Iconoclastes, the Little Parliament, Declaration of Breda, the Plague, Declaration of Rights.

9.—A short sketch of English Literature in the time of James I.

Latin.

1.—Translate—

i. Sed vos, o lecti, ferro quis scindere vallum
Apparat et mecum invadit trepidantia castra?
Non armis mihi Volcani, non mille carinis
Est opus in Teucros. Addant se protinus omnes
Etrusci socios. Tenebras et inertia furta
Palladii, caesis summae custodibus arcis,
Ne timeant; nec equi caeca condemur in alvo;
Luce, palam, certum est igni circumdare muros.
Haud sibi cum Danais rem faxo et pube Pelasga
Esse putent, decumum quos distulit Hector in annum.
Nunc adeo, melior quoniam pars acta diei,
Quod superest, laeti bene gestis corpora rebus
Procurate, viri, et pugnam sperate parari.

ii. Olli subridens sedato pectore Turnus:
Incipe, siqua animo virtus, et consere dextram;
Hic etiam inventum Priamo narrabis Achillen.
Dixerat. Ille rudem nodis et cortice crudo
Intorquet summis adnixus viribus hastam;
Excepere aurae; volnus Saturnia Iuno
Detorsit veniens, portaeque infigitur hasta.
At non hoc telum, mea quod vi dextera versat,
Effugies; neque enim is teli nec volneris auctor.

iii. Ac velut, optato ventis aestate coortis,
Dispersa immittit silvis incendia pastor;
Correptis subito mediis extenditur una
Horrida per latos acies Volcania campos;
Ille sedens victor flammas despectat ovantis:
Non aliter socium virtus coit omnis in unum,
Teque iuvat, Palla. Sed bellis acer Halaesus
Tendit in adversos, seque in sua colligit arma.
Hic mactat Ladona Pheretaque Demodocumque;
Strymonio dextram fulgenti deripit ense
Elatam in iugulum: saxo ferit ora Thoantis,
Ossaque dispersit cerebro permixta cruento.

2.—Parse fully—sæptam, adfata, evaserit, succiso, extulit, ictibus, cinxere, pinguia, transierim, narti.

3.—Give (i.) accusative singular, and genitive plural of—iter, res, leo, anceps, lux, melior.

(ii) The comparative and superlative of—fortiter, diu, parvus, ingens.

(iii.) The perfect infinitive active of—fero, mitto, vivo, vinco, tollo, torqueo.

4.—Translate into Latin—

i.—He promised to come.

ii.—He went to Rome to ask the Consul to help him.

iii.—We must love our friends.

iv.—Soldiers must obey their general.

v.—If you had come, he would not have died.

vi.—There is no doubt than you can prevent him from coming.

5.—Translate—

At plus Aeneas dextram tendebat inermem
Nudato capite, atque suos clamore vocabat:
Quo ruitis? quaeve ista repens discordia surgit?
O cohibete iras! ictum iam foedus, et omnes
Compositae leges; mihi ius concurrere soli;
Me sinite, atque auferte metus: ego foedera faxo
Firma manu: Turnum debent haec iam mihi sacra.

Has inter voces, media inter talia verba,
Ecce, viro stridens alis adlapsa sagitta est,
Incertum, qua pulsa manu, quo turbine adacta,
Quis tantam Rutulis laudem, casusne deusne,
Attulerit ; pressa est insignis gloria facti,
Nec sese Aeneae iactavit volnere quisquam.

Religious Knowledge.

(All Candidates must attempt questions 6, 7, and 8.)

1.—Describe how Saul became king, and write a *brief* account of his life.

2.—What wars between the Israelites and the Philistines are related in the First Book of Samuel?

3.—A *short* account of the course of events by which David became firmly established on the throne of Israel.

4.—Give the history of Absalom's rebellion.

5.—Contrast the condition of the children of Israel in the days of Samuel, and in the days of King David.

6.—Write down *very shortly* what you know of—Naomi, Hophni, Joel, Nahash, Michal, Joab, Uzzah, Nathan, Ziba, Amnon, Sheba.

7.—Where were the following and with what events are they connected :—Shiloh, Ashdod, Mizpeh, Naioth, Engedi, Rabbah, Mahanaim?

8.—Explain carefully with reference to the context—

i.—The word of the Lord was precious in those days.

ii.—To obey is better than sacrifice.

iii.—He bade them teach the children of Judah the use of the bow.

iv.—These men the sons of Zeruiah be too hard for me.

v.—I will be his father, and he shall be my son.

vi.—The man that hath done this thing shall surely die.

vii.—They be chafed in their minds as a bear robbed of her whelps.

viii.—By my God have I leaped over a wall.

Euclid I., II., III.

1.—The greater side of every triangle has the greater angle opposite it.

Explain clearly why the word greater (not greatest) is used in this enunciation, noticing exactly what difference it would make if the latter were substituted.

2.—Define a parallelogram.

Given the middle points of three of its sides, construct the parallelogram.

3.—Prove that in any right-angled triangle, the square on the side subtending the right angle is equal to the squares on the sides which contain the right angle.

Two opposite sides of a quadrilateral are each 3 inches long, the other two sides being respectively 2 and 4 inches, show that neither of the angles adjacent to the longest side can exceed a right angle.

4.—Divide a given straight line into two parts, such that the rectangle contained by the whole and one of the parts may be equal to the square on the other part.

5.—If a straight line be divided into two equal and also into two unequal parts, the rectangle contained by the unequal parts together with the square on the line between the points of section is equal to the square on half the line.

Write down the corresponding result in algebra.

6.—Find the centre of a given circle.

Show how the construction may be altered to meet the case where a portion only of the circumference is given.

7.—Prove that a circle cannot cut (1) a straight line, (2) another circle, in more than two points.

8.—Define similar segments of circles; and prove that similar segments of circles on equal straight lines are equal to one another.

9.—If from any point without a circle two straight lines be drawn, one of which cuts the circle and the other touches it; prove that the rectangle contained by the whole line which cuts the circle and the part of it without the circle will be equal to the square on the line which touches it.

10.—If a straight line be drawn from the centre O of a circle, and on it two points A, B be taken such that the rectangle contrined by OA, OB is equal to the square on the radius; then if any other circle be drawn through A and B, the tangents to the two circles at the points where they cut will be at right angles to each other.

Algebra.

1.—On dividing a certain expression by $x^2 - x + 1$, the quotient is $x^2 + x + 1$ and the remainder -1: determine what the expression must be.

2.—Find the G.C.M. of $3x^5 + 6x^4 + 5x^3 - 11x^2 - 28x - 7$, and $6x^4 - 15x^3 - 5x^2 + 35x - 21$.

3.—Prove the rule for finding the G.C.M. of two algebraical expressions.

4.—Add the Fractions—

$$\frac{x(y+z)}{(x-y)(x-z)} + \frac{y(z+x)}{(y-z)(y-x)} + \frac{z(x+y)}{(z-x)(z-y)}.$$

5.—Find the value of—

$$\frac{x - \left\{2x^2 - 1 - \left[2(x-1) + 3(x^2 - x)\right]\right\}}{x - \left\{2x^2 - 1 - x\left[3(x-1) + 4\right]\right\}}.$$

6.—Write down the factors of $a^3 + b^3 + c^3 - 3abc$; also all factors of $x^8 - y^8$ which are of lower degree than the fourth.

7.—Simplify—

$$\frac{\frac{a}{b} + \frac{b}{a} - 1}{\frac{a^2}{b^2} + \frac{a}{b} + 1} \times \frac{1 + \frac{b}{a}}{a - b} \div \frac{1 + \frac{b^3}{a^3}}{\frac{a^2}{b} - \frac{b^2}{a}}.$$

8.—If $2s = a + b + c$, show that—

$$2(s-a)(s-b)(s-c) + a(s-b)(s-c) + b(s-c)(s-a) + c(s-a)(s-b) = abc.$$

9.—Solve the equations—

(1) $\sqrt{x^2 - 7x + 4} + (x-1)(x-5) = (x-2)(x-3)$.

(2) $ax + by = ay - bx = \dfrac{a^2 + b^2}{a^2 - b^2}$.

10.—The length of a room is four feet more than its breadth. If it were one-fourth as long again, but of the same area, the cost of papering would be as many guineas as it now is pounds. Find its dimensions.

SEPTEMBER, 1895.

Mechanics and Hydrostatics.

1.—Enunciate and prove the Triangle of Forces.

A small heavy ring slides upon a smooth thin rod to the end of which it is attached by a weightless string. The rod is held in any position inclined to the vertical. Draw a triangle whose sides represent the forces acting on the ring.

2.—Show that the centre of gravity of a uniform wire bent into the shape of a triangle coincides with the centre of the circle inscribed in the triangle formed by joining the middle points of its sides.

3.—Describe and show how to graduate the common steel-yard.

4.—Explain how the measure of the velocity of a moving point depends upon the units of time and length.

If the unit of time be an hour, and the unit of length be a mile, what will be the measure of a point's velocity, which describes at a uniform rate two yards in a quarter of a minute?

5.—Investigate the formula $s = \frac{1}{2} ft.^2$.

Deduce the corresponding expression for the space described by a point in time t under a constant acceleration f, when it has an initial velocity u.

A point describes 7 ft. in 3 seconds, and 13 ft. in the next 3 seconds, find its acceleration supposed uniform.

6.—From Newton's second Law of Motion deduce the equation $P = mf$.

Hence obtain the definition of the unit of force.

If a force of 15 poundals act upon a mass of 13 pounds, what velocity will it generate in 8 seconds?

7.—Determine the specific gravity of a solid from the following data:—

Weight of vessel filled with distilled water = 179·3 grammes; weight of vessel, water and solid outside 241·9 grammes; weight of vessel, water and solid inside (the displaced water being removed) 234·8 grammes.

What precautions must be taken in determining the specific gravity of a solid?

8.—Prove that the surface of a liquid at rest is a horizontal plane.

9.—Describe a method of proving Boyle's Law experimentally.

A bladder of air occupies 150 c.c. at a depth of 60 ft. in water. What will be its volume at the surface, if the reading of the water barometer is 33 ft.

MARCH, 1896.

Xenophon. Anabasis, Books II. and III.

(N B.—All Candidates must attempt each question in order to pass.)

1. Translate into English—

(*a*) Ὁ δὲ δὴ ἔγραψα, ὅτι βασιλεὺς ἐξεπλάγη τῇ ἐφόδῳ τῇδε, δῆλον ἦν· τῇ μὲν γὰρ πρόσθεν ἡμέρᾳ πέμπων τὰ ὅπλα παραδιδόναι ἐκέλευε, τότε δὲ ἅμα ἡλίῳ ἀνατέλλοντι κήρυκας ἔπεμψε περὶ σπονδῶν. Οἱ δ' ἐπεὶ ἦλθον πρὸς τοὺς προφύλακας, ἐζήτουν τοὺς ἄρχοντας. Ἐπεὶ δ' ἀπήγγειλαν οἱ προφύλακες, Κλέαρχος, τυχὼν τότε τὰς τάξεις ἐπισκοπῶν, εἶπε τοῖς προφύλαξι κελεύειν τοὺς κήρυκας περιμένειν, ἄχρι ἂν σχολάσῃ. Ἐπεὶ δὲ κατέστησε τὸ στράτευμα, ὥστε καλῶς ἔχειν ὁρᾶσθαι πάντῃ φάλαγγα πυκνὴν, τῶν δὲ ἀόπλων μηδένα καταφανῆ εἶναι, ἐκάλεσε τοὺς ἀγγέλους, καὶ αὐτός τε προῆλθε, τούς τε εὐοπλοτάτους ἔχων καὶ εὐειδεστάτους τῶν αὐτοῦ στρατιωτῶν, καὶ τοῖς ἄλλοις στρατηγοῖς ταὐτὰ ἔφρασεν. Ἐπεὶ δὲ ἦν πρὸς τοῖς ἀγγέλοις, ἀνηρώτα, [τί βούλοιντο]. Οἱ δ' ἔλεγον, ὅτι περὶ σπονδῶν ἥκοιεν ἄνδρες, οἵτινες ἱκανοὶ ἔσονται, τά τε παρὰ βασιλέως τοῖς Ἕλλησιν ἀπαγγεῖλαι, καὶ τὰ παρὰ τῶν Ἑλλήνων βασιλεῖ.

II. 3, §§ 1-4.

(*b*) Μένων δὲ ὁ Θετταλὸς δῆλος ἦν ἐπιθυμῶν μὲν πλουτεῖν ἰσχυρῶς, ἐπιθυμῶν δὲ ἄρχειν, ὅπως πλείω λαμβάνοι· ἐπιθυμῶν δὲ τιμᾶσθαι, [ἵνα πλείω κερδαίνοι]· φίλος τ' ἐβούλετο εἶναι τοῖς μέγιστον δυναμένοις, ἵνα ἀδικῶν [μὴ] διδοίη δίκην. Ἐπὶ δὲ τὸ κατεργάζεσθαι, ὧν ἐπιθυμοίη, συντομωτάτην ὁδὸν ᾤετο εἶναι διὰ τοῦ ἐπιορκεῖν τε καὶ ψεύδεσθαι καὶ ἐξαπατᾶν· τὸ δὲ ἁπλοῦν τε καὶ ἀληθὲς ἐνόμιζε τὸ αὐτὸ τῷ ἠλιθίῳ εἶναι. Στέργων δὲ φανερὸς μὲν ἦν οὐδένα, ὅτῳ δὲ φαίη φίλος εἶναι, τούτῳ ἔνδηλος ἐγιγνετο ἐπιβουλεύων. Καὶ πολεμίου μὲν οὐδενὸς κατεγέλα, τῶν δὲ συνόντων πάντων ὡς καταγελῶν ἀεὶ διελέγετο. Καὶ τοῖς μὲν τῶν πολεμίων κτήμασιν οὐκ ἐπεβούλευε. χαλεπὸν γὰρ ᾤετο εἶναι, τὰ τῶν φυλαττομένων λαμβάνειν· τὰ δὲ τῶν φίλων μόνος ᾤετο εἰδέναι ὅτι ῥᾷστον ἀφύλακτα λαμβάνειν.

Καὶ ὅσους μὲν ἂν αἰσθάνοιτο ἐπιόρκους καὶ ἀδίκους, ὡς εὖ ὡπλισμένους ἐφοβεῖτο· τοῖς δ' ὁσίοις καὶ ἀλήθειαν ἀσκοῦσιν ὡς ἀνάνδροις ἐπειρᾶτο χρῆσθαι.—II. 6, §§ 21-25.

(c) "Ἄνδρες, νῦν ἐπὶ τὴν Ἑλλάδα νομίζετε ἁμιλλᾶσθαι, νῦν πρὸς τοὺς παῖδας καὶ τὰς γυναῖκας, νῦν ὀλίγον πονήσαντες χρόνον ἀμαχεὶ τὴν λοιπὴν πορευσόμεθα." Σωτηρίδας δὲ ὁ Σικυώνιος εἶπεν· "Οὐκ ἐξ ἴσου, ὦ Ξενοφῶν, ἐσμέν· σὺ μὲν γὰρ ἐφ' ἵππου ὀχῇ, ἐγὼ δὲ χαλεπῶς κάμνω τὴν ἀσπίδα φέρων." Καὶ ὅς, ἀκούσας ταῦτα, καταπηδήσας ἀπὸ τοῦ ἵππου, ὠθεῖται αὐτὸν ἐκ τῆς τάξεως, καὶ τὴν ἀσπίδα ἀφελόμενος ὡς ἐδύνατο τάχιστα ἐπορεύετο. [Ἐτύγχανε] δὲ καὶ θώρακα [ἔχων] τὸν ἱππικόν, ὥστε ἐπιέζετο. Καὶ τοῖς μὲν ἔμπροσθεν ὑπάγειν παρεκελεύετο, τοῖς δὲ ὄπισθεν, παριέναι, μόγις ἑπομένοις. Οἱ δ' ἄλλοι στρατιῶται παίουσι καὶ βάλλουσι καὶ λοιδοροῦσι τὸν Σωτηρίδαν, ἔστε ἠνάγκασαν λαβόντα τὴν ἀσπίδα πορεύεσθαι. Ὁ δὲ ἀναβὰς, ἕως μὲν βάσιμα ἦν, ἐπὶ τοῦ ἵππου ἦγεν· ἐπεὶ δὲ ἄβατα ἦν, καταλιπὼν τὸν ἵππον, ἔσπευδε πεζῇ. Καὶ φθάνουσιν ἐπὶ τῷ ἄκρῳ γενόμενοι τοὺς πολεμίους.—III. 4, § 46.

Explain the words within brackets in the above.

2. Translate—

ΕΛ. ὦ παῖ Κλυταιμνήστρας τε κἀγαμέμνονος,
παρθένε μακρὸν δὴ μῆκος Ἠλέκτρα χρόνου,
πῶς, ὦ τάλαινα, σύ τε κασίγνητός τε σὸς
τλήμων Ὀρέστης μητρὸς ὅδε φονεὺς ἔφυ;
προσφθέγμασιν γὰρ οὐ μιαίνομαι σέθεν,
εἰς Φοῖβον ἀναφέρουσα τὴν ἁμαρτίαν.
καίτοι στένω γε τὸν Κλυταιμνήστρας μόρον
ἐμῆς ἀδελφῆς, ἥν, ἐπεὶ πρὸς Ἴλιον
ἔπλευσ' ὅπως ἔπλευσα θεομανεῖ πότμῳ,
οὐκ εἶδον, ἀπολειφθεῖσα δ' αἰάζω τύχας.

EUR. *Or.*, 71-80.

3. Parse ἔμειναν, ἐδύναντο, κάωμεν, ἔξω. Compare αἰσχρός, σώφρων, μέλως, μάλα.

4.—Translate into Greek—

(*a*) Cyrus having called together the generals, said Xenias and Pasion have deserted us.

(*b*) Clearchus asked the messenger how much land there was between the Tigris and the canal.

(*c*) To whom this seems good, said he, let him hold up his hand.

(*d*) The bows of the Persians are large.

French.

1.—Translate into English—

(*a*) Soit que l'arrivée de sa sœur eût rappelé à Orso avec plus de force le souvenir du toit paternel, soit qu'il souffrît un peu devant ses amis civilisés du costume et des manières sauvages de Colomba, il annonça dès le lendemain le projet de quitter Ajaccio et de retourner à Pietranera. Mais cependant il fit promettre au colonel de venir prendre un gîte dans son humble manoir, lorsqu'il se rendrait à Bastia, et en revanche il s'engagea à lui faire tirer daims, faisans, sangliers et le reste. La veille de son départ, au lieu d'aller à la chasse, Orso proposa une promenade au bord du golfe. Donnant le bras à Miss Lydia, il pouvait causer en toute liberté, car Colomba était restée à la ville pour faire ses emplettes, et le colonel les quittait à chaque instant pour tirer des goëlands et des fous, à la grande surprise des passants qui ne comprenaient pas qu'on perdît sa poudre pour un pareil gibier.

(*b*) "Maintenant je ne puis lui envoyer de lettres. Le préfet est arrivé, et Pietranera est pleine de ses estafiers. Plus tard nous verrons. Ah ! si vous connaissiez mon frère, Miss Nevil, vous l'aimeriez comme je l'aime... Il est si bon ! si brave ! Songez-donc à ce qu'il a fait ! Seul contre deux et blessé !" Le préfet était de retour. Instruit par un exprès de l'adjoint, il était venu accompagné de gendarmes et de voltigeurs, amenant de plus procureur du roi, greffier et le reste, pour instruire sur la nouvelle et terrible catastrophe qui compliquait, ou, si l'on veut, qui terminait les inimitiés des familles de Pietranera.

(*c*) Pendant que je dévorais les bouquins—où il faut en venir à la pierre à fusil—qui m'en saurout gré—tenait à loyer du colonel—il ne l'avait pas envoyé chercher—il pensa tomber à la renverse—donnant sur la place—en venir à bout—en voilà cncorc une qui fausse compagnie—de faire lâcher prise à Colomba.

(*d*) Cette pensée lui causa une sorte de vertige. Pour lui-même il eût pu, sans trop d'émotion, accepter ce coup inattendu : au milieu des désastres qui affligeaient la France depuis tant d'années, trop de sang avait coulé pour que l'idée d'une fin violente ne fût pas devenue familière à tous ; à force de voir tomber ses voisins, on s'était accoutumé à attendre la mort pour son propre compte ; mais comment l'accepter pour celui d'un enfant qu'on avait protégé, auquel on supposait une longue et heureuse destinée ? Frère Cyrille ne pouvait s'habituer à la pensée que tant d'espérances allaient être moissonnées dans leur fleur ; il s'indignait et se désolait tour à tour.

2.—Translate into French—How many books are there ? I shall be eight years old to-morrow. He has just gone out. Whom are you afraid of ? I have only a penny.

3.—Give the first and third person plural of the present indicative of *agréer, appeler, devoir, avancer, réussir.*

4.—Give the feminine of *doux, fraternel, beau, dissous, franc,* and the plural of *bail, chou, bétail, travail, loyal.*

5.—Give the French for 300 francs—the year 1520—Henry VII.—the 75th regiment—October 10th.

German.

1.—Translate into English—

Was kann dein Herz beklemmen, sag' es mir.
Gesegnet ist dein Fleisz, dein Glücksstand blüht,
Voll sind die Scheunen, und der Rinder Schaaren,
Der glatten Pferde wohlgenährte Zucht
Ist von den Bergen glücklich heimgebracht
Zur Winterung in den bequemen Ställen.
—Da steht dein Haus, reich, wie ein Edelsitz;
Von schönem Stammholz ist es neu gezimmert
Und nach dem Richtmasz ordentlich gefügt;
Von vielen Fenstern glänzt es wohnlich, hell;
Mit bunten Wappenschildren ist's bemalt
Und weisen Sprüchen, die der Wandersmann
Verweilend liest und ihren Sinn bewundert.

2.—Translate and explain with reference to the context—

(*a*) Greif an mit Gott! Dem Nächsten muss man helfen.

(*b*) Vom sichern Port lässt sich's gemächlich rathen.

(*c*) Der kluge Mann baut vor.

(*d*) Die schnellen Herrscher sind's, die kurz regieren.

(*e*) Es lebt ein andersdenkendes Geschlecht.

(*f*) Früh übt sich was ein Meister werden will.

(*g*) Die Axt in Haus erspart den Zimmermann.

(*h*) Entränn' er jetzo kraftlos meinen Händen
Ich habe keinen zweiten zu versenden.

(*i*) Dem Schwachen ist sein Stachel auch gegeben.

(*j*) Wer Thränen ernten will, muss Liebe säen.

3.—Translate into English—

Mit der Duldung wuchs meine Wuth, und mit dem ersten Stundenschlag fuhr ich dem einen, der sich's am Wenigsten versah, mit der Hand in die Nackenhaare und stürzte ihn augenblicklich zu Boden, indem ich mit dem Knie seinen Rücken drückte; den andern, einen jüngeren und schwächeren, der mich von hinten anfiel, zog ich bei dem Kopfe durch den Arm und erdrosselte ihn fast, indem ich ihn an mich preszte. Nun war der letzte noch übrig und nicht der schwächste, und mir blieb nur die linke Hand zu meiner Vertheidigung. Allein ich ergriff ihn beim Kleide, und durch eine geschickte Wendung von meiner Seite, durch eine übereilte von seiner brachte ich ihn nieder und stiesz ihn mit dem Gesicht gegen den Boden.

4.—Translate into German—The poor are often happier than the rich. He served with great renown in the last war. My brother's blue coat is of fine cloth. I see lights in the windows of all the houses of the town. His nephew is a soldier.

5.—Give the gender of Blut, Glut, Brut, Mut, Fleisch, Fleiss, That, Rat, Saat, Staat.

6.—Give the past tense and past participle of beissen, biegen, binden, fliegen, helfen, leihen, messen, nehmen, schlafen, schwinden.

PRELIMINARY EXAMINATION IN ARTS FOR THE DEGREE OF BACHELOR IN MEDICINE.

March, 1896.

Xenophon. Anabasis I.

1. Translate into English—

(*a*) Ἐμοὶ οἶν δοκεῖ οὐχ ὥρα εἶναι ἡμῖν καθεύδειν, οὐδ’ ἀμελεῖν ἡμῶν αὐτῶν, ἀλλὰ βουλεύεσθαι, ὅ τι χρὴ ποιεῖν ἐκ τούτων. Καὶ ἕως γε μένομεν αὐτοῦ, σκεπτέον μοι δοκεῖ εἶναι, ὅπως ἀσφαλέστατα μένωμεν· εἴ τε ἤδη δοκεῖ ἀπιέναι, ὅπως ἀσφαλέστατα ἄπιμεν καὶ ὅπως τὰ ἐπιτήδεια ἕξομεν· ἄνευ γὰρ τούτων οὔτε στρατηγοῦ οὔτε ἰδιώτου ὄφελος οὐδέν. Ο δ’ ἀνὴρ πολλοῦ μὲν ἄξιος φίλος, ᾧ ἂν φίλος ᾖ, χαλεπώτατος δ’ ἐχθρός, ᾧ ἂν πολέμιος ᾖ, ἔχει δὲ δύναμιν καὶ πεζὴν καὶ ἱππικὴν καὶ ναυτικήν, ἣν πάντες ὁμοίως ὁρῶμέν τε καὶ ἐπιστάμεθα· καὶ γὰρ οὐδὲ πόῤῥω δοκοῦμέν μοι αὐτοῦ καθῆσθαι· ὥστε ὥρα λέγειν, ὅ τι τις γιγνώσκει ἄριστον εἶναι.

(*b*) Καὶ ἤδη τε ἦν μέσον ἡμέρας καὶ οὔπω καταφανεῖς ἦσαν οἱ πολέμοι· ἡνίκα δὲ δείλη ἐγίγνετο, ἐφάνη κονιορτὸς ὥσπερ νεφέλη λευκή, χρόνῳ δὲ συχνῷ ὕστερον ὥσπερ μελανία τις ἐν τῷ πεδίῳ ἐπὶ πολύ. Ὅτε δὲ ἐγγύτερον ἐγίγνοντο, τάχα δὴ καὶ χαλκός τις ἤστραπτε καὶ αἱ λόγχαι καὶ αἱ τάξεις καταφανεῖς ἐγίγνοντο. Καὶ ἦσαν ἱππεῖς μὲν λευκοθώρακες ἐπὶ τοῦ εὐωνύμου τῶν πολεμίων· Τισσαφέρνης ἐλέγετο τούτων ἄρχειν· ἐχόμενοι δὲ τούτων γεῤῥοφόροι, ἐχόμενοι δὲ ὁπλῖται σὺν ποδήρεσι ξυλίναις ἀσπίσιν· Αἰγύπτιοι δ’ οὗτοι ἐλέγοντο εἶναι· ἄλλοι δ’ ἱππεῖς, ἄλλοι τοξόται.

2. Parse and give the meanings of: ἀποκτενῶν, δοθῆναι, ἀφίκοντο, ἔθηκε, ἥσθη, δεδιώς, ᾖ, ἀναβᾶσι, ἀπέσπα, ἵησι, διαγγεῖλαι, ἕω.

3. Give the future, aorist and perfect of: ἀδικέω, τάσσω, αἵρεω, ἔχω, μάχομαι, ἐλαύνω, πάσχω, ἀκούω, ἐμβάλλω, ἀποδείκνυμι, ἐάω, ὁράω.

Cicero. De Amicitia.

1.—Translate into English—

(i.) Cumque plurimas et maximas commoditates amicitia contineat, tum illa nimirum praestat omnibus, quod bonam spem praelucet in posterum, nec debilitari animos aut cadere patitur. Verum enim amicum qui intuetur, tamquam exemplar aliquod intuetur sui. Quocirca et absentes adsunt et egentes abundant et imbecilli valent et, quod difficilius dictu est, mortui vivunt: tantus eos honos, memoria, desiderium prosequitur amicorum; ex quo illorum beata mors videtur, horum vita laudabilis. Quod si exemeris ex rerum natura benevolentiae coniunctionem, nec domus ulla nec urbs stare poterit, ne agri quidem cultus permanebit. Id si minus intellegitur, quanta vis amicitiae concordiaeque sit ex dissensionibus atque discordiis perspici potest. Quae enim domus tam stabilis, quae tam firma civitas est, quae non odiis et discidiis funditus possit everti? Ex quo quantum boni sit in amicitia iudicari potest.

(ii.) Ubi enim istum invenias, qui honorem amici anteponat suo? Quid? haec ut omittam, quam graves quam difficiles plerisque videntur calamitatum societates! Ad quas non est facile inventu qui descendant. Quamquam Ennius recte,

Amicus certus in re incerta cernitur;

tamen haec duo levitatis et infirmitatis plerosque convincunt, aut si in bonis rebus contemnunt aut in malis deserunt. Qui igitur utraque in re gravem, constantem, stabilem se in amicitia praestiterit, hunc ex maxime raro genere hominum iudicare debemus et paene divino.

2.—Give the meaning, perfect and infinitive, of:—Averto, soleo, reperio, diligo, dissuadeo, acquiesco. Parse: exemeris, assentando, patiatur, osurus, adjuves, impetrari.

3.—Illustrate by examples the following constructions:—Gerundive attraction, ablative of comparison, indirect question, *ut* final, *ut* consecutive, ablative absolute.

Voltaire. Siècle de Louis XIV.

1. —Translate into English—

(*a*) En fin le cardinal Mazarin ramena le roi et la nouvelle reine à Paris. Un père qui aurait marié son fils sans lui donner l'administration de son bien, n'en eût pas usé autrement que Mazarin; il revint plus puissant et plus jaloux de sa puissance, et même des honneurs, que jamais.

Il exigea et il obtint que le parlement vînt le haranguer par députés. C'était une chose sans exemple dans la monarchie ; mais ce n'était pas une trop grande réparation du mal que le parlement lui avait fait. Il ne donna plus la main aux princes du sang, en lieu tiers, comme autrefois. Celui qui avait traité don Louis de Haro en égal, voulut traiter le grand Condé en inférieur.

(*b*) Alors les ambassadeurs de France prétendaient la main sur les électeurs. Celui de Brandebourg offrit tous les tempéraments pour traiter à Clèves avec le comte depuis maréchal d'Estrades, ambassadeur auprès des États Généraux. Le roi ne voulut jamais permettre qu'un homme qui le répresentait cédât à un électeur, et le comte d'Estrades ne put traiter.

(*c*) Ces conditions furent fixées avec la hauteur d'un conquérant ; cependant elles n'étaient pas si outrées qu'elles dussent désespérer ses ennemis, et les obliger à se réunir contre lui par un dernier effort : il parlait à l'Europe en maître et agissait en même temps en politique.

2.—Give the meanings and derivations and (in the case of nouns) the genders of *prémices*, *diète*, *dorénavant*, *procès*, *épithète*, *rétréci*, *hoqueton*, *couplet*, *recors*, *suaire*, *péage*, *ligne*.

3.—In conjugating verbs negatively where do you place *jamais*, *plus*, *personne*, *que?* Put into French :—We have never told lies. I had read only two pages. Am I telling lies? Are not your friends gone? Had he not punished anyone?

Immermann. Der Oberhof.

1.—Translate into English—

(*a*) Der alte Jochem liess noch immer weder von sich noch von dem entwichenen Abenteurer hören, und seinen jungen Gebieter wollte doch nachgerade eine stille Unruhe beschleichen. Denn so umspinnt uns Alle die jetzige geregelte Zeit, dass Niemand, und sei es noch so ungebunden, lange ausdauern kann, ohne den Rücken an ein Geschäft oder an ein Verhältniss zu lehnen . . . Täglich wurde geknallt, freilich immer vorbei, so dass der Alte, der stets ins Schwarze traf, er mochte zielen, worauf er wollte, über diese fruchtlosen Bemühungen verwunderte Augen zu machen began (Ch. vii.).

(*b*) Gross, dass man drei Hochzeiter höherer Stände damit hätte austatten können, gerieth dieser Strauss, denn bei den Bauern muss Alles in das Gewicht fallen. Auch nicht ganz lieblich duftete er, denn die Salbei verbreitete einen starken, die Sternblume sogar einen übeln Geruch: indessen durfte Beides nicht fehlen, sollte der Strauss herkömmliche Vollständigkeit besitzen (Ch. x.).

2.—Translate and explain—*Geschick haben; Geldkatze; Pistole; aus der Fassung bringen; Pfaffenwiese; Gauch; Wildbann; Kornbreite; Lindenschwärmer; Aas.*

3.—Translate into German—

I am not going out this evening; the days are shortening fast. What dress are you putting on to-morrow? He is copying all these letters. Will you have the kindness to send me the book which you promised me long ago? He who is contented is happy.

4.—Give the imperf. indic. and subj., and the meaning of:—*Blasen, biegen, denken, dreschen, empfehlen, erwägen, frieren, gelten, genesen, reissen, scheiden, sieden;* and the gender, plural, and meaning of—*Rathhaus, Muth, Hochmuth, Anmuth, Bein, Gebet, Wald, Dach.*

Mechanics, Hydrostatics, and Pneumatics.

1.—State the Laws of Motion and justify the third.

Distinguish between an Impulse and a Force and find the proper measure of the latter in terms of the motion it produces.

2.—A body slides down a rough inclined plane; find the velocity with which it arrives at the foot.

What work is lost if the body be allowed to slide down to the bottom and then dragged up to the top?

3.—Prove that energy is lost in the impact of two imperfectly elastic spheres.

Two elastic balls, 2 oz. and 3 oz. in weight, will bounce to one quarter the height from which they are dropped. If the former be projected with a velocity of 10 feet per second against the latter at rest, find their velocities after impact.

4.—Find the conditions of equilibrium of a system of forces in one plane.

A right-angled triangle is formed by three rods jointed together with smooth pins and set upright with one side horizontal and another vertical. Find the stresses at the pins.

5.—Find the centre of gravity of a triangle.

Show that if the centre of gravity of the triangle coincide with that of its sides, the triangle is equilateral.

6.—Describe the most perfect form of air-pump that you know, and explain why it is unable to produce a perfect vacuum.

The top of a barometer communicates with a vessel partially exhausted of air. If the barometer stands at 15 inches when the temperature of the vessel is 45° F., how high will it stand if the vessel be raised to 70° F.?

7.—Define Pressure at Point in a fluid, Centre of Pressure, Average Pressure.

Find the centre of pressure of a plane triangle with its base horizontal, (1) with its base in the surface of the liquid, (2) with its vertex in the surface.

8.—Show that a floating body displaces its own weight of water.

Two cylinders of equal size, but of densities 3 and $2\frac{1}{2}$, are connected by a string which passes over a pulley. If a vessel of water be placed beneath in such a position that if the cylinders were at the same level they would be each half immersed, find the difference of levels at which they will rest.

Euclid IV., VI.

1.—Inscribe a circle in a given triangle.

Prove that the distances of the points of contact from the angles are one-half the excesses of two sides over the third.

2.—In a given circle inscribe a triangle equiangular to a given triangle.

Two circles touch at A. ABC, ADE cut the circles in B, D and in C, E respectively; show that BD, CE are parallel.

3.—Inscribe a regular quindecagon in a circle.

How would you modify the construction in order to inscribe a figure of twenty sides?

4.—Prove that in any triangle the middle points of the sides and the feet of the perpendiculars from each vertex upon the opposite side lie upon a circle.

5.—Define *similar figures; ratio; equality of ratios.*

Prove that triangles and parallelograms of the same altitude are to one another as their bases.

6.—Prove that similar polygons are to one another in the duplicate ratio of corresponding sides.

Each corner of a square is joined to the middle point of the opposite side; show that the central square which the joining lines cut off is one-fifth of the original square in area.

7.—If a quadrilateral be inscribed in a circle, the rectangles contained by the pairs of opposite sides are together equal to the rectangle contained by the diagonals.

Prove that the difference of the squares on two sides of a triangle is twice the rectangle contained by the base and the length between the middle point of the base and the foot of the perpendicular from the vertex.

English History. William III.—George II.

1.—Show by a genealogical table the claim to the throne by birth of the various monarchs and pretenders of the period.

2.—What liberties were claimed in the Declaration of Rights?

3.—Describe the revolt and suppression of Ireland on the accession of William III.

4.—Sketch concisely the career of Marlborough.

5.—Give an account of the development of Commerce and Finance during this period.

6.—What circumstances made the Church of England weak during the eighteenth century? Sketch the rise of the Methodists.

7.—Give an account of the rising of 1745.

8.—Write short notes on the following persons and places:—*Dupleix*, *Montcalm*, *Swift*, *Newton*, *Fontenoy*, *Black Hole of Calcutta*.

SEPTEMBER, 1895.

Geometrical Optics.

1.—When are the laws for reflection and refraction of a ray of light incident on the surface of any medium? Prove that the deviation of a refracted ray increases with the incidence.

A straight rod inclined to the vertical is placed in water; describe and account for the appearance.

2.—A surface is illuminated by a bright point; find a relation between the illumination at any point of the surface and its position with respect to the bright point.

Explain the construction and use of Ritchie's Photometer.

3.—Define the term "image;" and find the image of a point placed directly in front of spherical reflecting surface.

A plane and a concave spherical mirror are placed opposite to one another at a distance greater than the radius, and a bright point is placed on their common normal; find the positions of the three images formed by fewest reflections; and show that if the point move up to coincidence with the nearer image, the other two will also coincide with one another.

4.—Describe the constitution of the human eye. What provisions are found in it for viewing objects (1) at varying distances and (2) of varying brightness?

Explain how the defects of "long sightedness" and "short sightedness" may be corrected.

A person who can see an object best at a distance of 36 inches is reading in a book at a distance of 18 inches; what is the focal length of the spectacles he should use?

5.—Explain how it is possible by the use of two lenses in contact, made of different kinds of glass, to form a combination, which is largely achromatic.

How could you combine a series of prisms so as to make a "direct vision spectroscope?"

If the prism in Newton's experiment be placed in a position of minimum deviation (1) for red rays and (2) for violet rays, which gives the longer spectrum?

6.—Describe the optical construction of the common Opera Glass. How does it differ from the Astronomical Telescope, and what are its special advantages?

Determine its magnifying power; and show what would be the effect of partially covering (1) the object-glass and (2) the eye-glass.

March, 1896.

Logic.

1.—Distinguish between Inductive and Deductive Logic, Verbal and Real Propositions.

2.—State the Laws of Thought with illustrations of each.

3.—What is meant by the Modality of Propositions and in what way does Logic deal with it? How many Modes are there?

4.—Define Property, Inseparable Accident, Separable Accident, Proposition, Immediate Inference, Syllogism, Enthymeme.

5.—State the rules for forming a logical classification.

6.—What is meant by the Import of Propositions, and what views are held on the subject?

7.—Construct syllogisms in Fresison, Disamis, and Baroko, and reduce them.

8.—Construct a Simple Destructive Dilemma and a Compound Constructive Dilemma and rebut them.

GEORGE HARE PHILIPSON,
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University of Durham College of Medicine,
Newcastle-upon-Tyne, 1896.

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PUPILS' APPOINTMENTS.

Ten House Physicians, each holding office for one year, are appointed by the Physicians. Ten House Surgeons, each holding office for one year, are appointed by the Surgeons. Each House Physician and each House Surgeon receives a salary of £25, and is provided with rooms for six months.

The Midwifery Assistant holds office for six months, and is appointed by the Physician-Accoucheur. He is provided with rooms by the Hospital Authorities.

Two Chloroformists are appointed, and receive rooms and a salary.

The Ophthalmic House Surgeon is appointed by the Ophthalmic Surgeons, and receives rooms. The Extern Midwifery Assistant is appointed every three months, and receives a salary of £50 a year.

The Clinical Clerks and the Obstetric Clerks, the Clerks to the Out-Patients, the Dressers to the In and Out-Patients, and the Clerks and Dressers in the Special Departments, are chosen from the diligent students. No fee is paid for any of these appointments.

MEDICAL AND SURGICAL STAFF.

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Physicians—Dr Church, Dr. Gee, Sir Dyce Duckworth, Dr. Hensley, Dr. Brunton, F.R.S.
Assistant Physicians—Dr. Norman Moore, Dr. S. West, Dr. Ormerod, Dr. Heningham, Dr. Tooth.
Consulting Surgeons—Sir J. Paget, Bart., D.C.L., F.R.S., Luther Holden, Esq.
Consulting Ophthalmic Surgeon—Mr. Power.
Surgeons—Mr. T. Smith, Mr. Willett, Mr. Langdon, Mr. Marsh, Mr. Butlin.
Assistant Surgeons—Mr. Walsham, Mr. Cripps, Mr. Bruce Clarke, Mr. Bowlby, Mr. Lockwood.
Physicians-Accoucheur—Dr. Champneys, Dr. Griffith.
Ophthalmic Surgeons—Mr. Vernon. Mr. Jessop.
Dental Surgeons—Mr. Paterson, Mr. Ackery.

THE COLLEGE.

Students attending the practice of the Hospital. or the lectures in the Medical School, are admitted to residence in the College within the Hospital walls, subject to the College regulations.

Warden of the College—Dr. T. W. Shore.

LECTURERS.

Medicine—Sir D. Duckworth, Dr. Moore.
Surgery—Mr. Willett, Mr. Marsh.
Descriptive and Surgical Anatomy—Mr. Walsham, Mr. Bruce Clarke.
General Anatomy, Physiology, and Histology—Dr. Klein, F.R.S.
Chemistry and Practical Chemistry—Dr. Russell, F.R.S.
Materia Medica—Dr. Brunton, F.R.S.
Midwifery, and the Diseases of Women and Children—Dr. Champneys.
Pathological Anatomy—Dr. Kanthack.
Botany—Rev. Geo. Henslow.
Forensic Medicine—Dr. Hensley.
Comparative Anatomy—Dr. T. W. Shore.
Ophthalmic Surgery—Mr. Vernon.
Public Health—Dr. Thorne.

OPEN SCHOLARSHIPS.

Four Scholarships and one Exhibition, respectively worth £150, £75, £75, £50, and £20 each, tenable for one year, will be competed for in September, 1896, viz.—One Senior Open Scholarship of the value of £75 will be awarded to the best candidate (if of sufficient merit) in Physics and Chemistry. One Senior Open Scholarship of the value of £75 will be awarded to the best candidate (if of sufficient merit) in Biology and Physiology.

Candidates for these Scholarships must be under twenty-five years of age, and must not have entered to the Medical and Surgical Practice of any London Medical School.

The Shuter Scholarship, value £50, in Anatomy, Physiology and Pharmacology, is awarded in July, and is open only to Graduates of the University of Cambridge.

All communications to be addressed to the Warden of the College, St. Bartholomew's Hospital, London, E.C.

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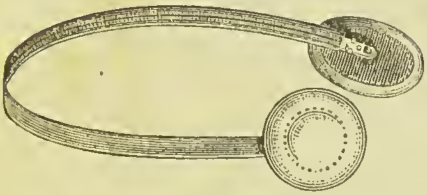

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